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IDENTIFIERS	Education Amendments 1974; Mountain Bell Project MT; *National Center for Career Education

ABSTRACT

To deliver career education assistance to practitioners by facilitating the flow of usable materials and resources on a nationwide scale, the Career Education Information, Training and Instructional Materials System project (1) undertook operation of NCCE's (National Center for Career Education) materials and education services at the University of Montana and (2) participated in activities of "national significance"--e.g., acquiring career education materials from all states and generating national computer services. The prototype center established at the university provided training, identification of appropriate instructional materials, and national communication of career education materials. Activities were directed toward maintenance of the instructional materials--processing (identification, collection, classification of materials), quality control (e.g., continuous field testing evaluation and revision), resource center and data bank, and dissemination. The main thrust was local level curriculum development in career education through inservice staff training and use of resource and specifically developed materials. A training (inservice) model developed in 1976-77 was field tested in various settings. Shorter orientation and clarification sessions in career education were also carried on, and over 5,500 prospective users were informed about NCCE and its work. (Appendixes, amounting to over one-half of the document, include an evaluation of and an extensive report on the Mountain Bell Project, an evaluation of another inservice training project, and comparing career education information and technical assistance systems.) (YLB)

ED182556

NATIONAL CENTER FOR CAREER EDUCATION

NCCE

at the University of Montana P. O. Box 7815
Missoula, Montana 59807 (406) 243-5262/6466

PERFORMING A SERVICE OF PROFESSIONAL ASSISTANCE BY LINKING INDIVIDUAL/INSTITUTIONAL NEEDS TO EXISTING CAREER EDUCATION PROGRAMS

CEITAIMS

Career Education Information Training and Instructional System

FINAL REPORT

1977-1978

CE 024 199

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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U. S. Office of Education
Grant and Procurement Management Division
Occupational and Adult Education Branch
400 Maryland Ave., S.W.
Washington, D.C. 20202

1. GRANT: G 007700093

2. PROJECT: 554AH70344

3. NATURE OF REPORT: Annual

4. PROJECT TITLE: Career Education Training and Instructional Materials System

5. PERIOD COVERED BY THIS REPORT: Sept. 15, 1977 - Sept. 14, 1978

6. CATEGORY OF THIS PROJECT: Communications (as specified in 45 CRF 160.d.5)

7. PROJECT DIRECTOR: Dr. Vincent D. Barry

8. GRANTEE: NCCE, Inc.
P. O. Box 7815
Missoula, Montana 59807
(406) 243-5262 or 243-5266

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FOLLOW THIS OUTLINE IN COMPLETING YOUR PERFORMANCE REPORT.

CAREER EDUCATION PROGRAM
PROJECT PERFORMANCE REPORTS

FORM APPROVED
OMB NO. 51-R1187

1. PROJECT NUMBER

2. GRANT NUMBER
G007700093

3. NATURE OF REPORT
☐ SEMI-ANNUAL ☒ FINAL

4. PROJECT TITLE
Career Education Information Training and Instructional Materials System (CEITAIMS)

5. PERIOD COVERED BY THIS REPORT
FROM (month, day, year) 9/14/77
TO (month, day, year) 9/15/78

6. CATEGORY OF PROJECT (as specified in 45 CFR 160d.5 and 160d.11)
☐ INCREMENTAL ☐ SETTINGS ☐ POPULATIONS ☐ TRAINING ☒ COMMUNICATIONS ☐ STATE PLAN

7. NAME OF PROJECT DIRECTOR
Dr. Vincent D. Barry

8. NAME AND ADDRESS OF GRANTEE/ASSISTANCE CONTRACTOR INSTITUTION
NCCE
P.O. Box 7815
Missoula, Mt 59801

TELEPHONE
AREA CODE 406
NUMBER 243-5262

9. Major Activities. List, in specific terms, major accomplishments under each objective of the project during this report period. Include progress under both learner outcome and process objectives. Include any changes in objectives since last report.

10. Project Participants *(include in final report only)*. Completely and accurately fill out the attached form entitled "Career Education Program: Participant Summary."

11. Evaluation. Describe implementation of the evaluation plan to date, including research design, instruments, and data collection plans and activities. Include any changes in the plan since last report. Present data showing project accomplishments and explain what led to these accomplishments. Present data indicating lack of success and explain what problems hindered success.

12. Anticipated Changes and/or Problems. Describe any problems anticipated in implementing the project between this report and the next report. Discuss steps that will be taken to resolve problems. Include any changes in objectives, activities, or evaluation efforts planned.

13. Dissemination Activities. Describe dissemination activities conducted during report period, including audiences, products developed, and results of dissemination. Attach copies of products, publicity materials on project, etc. Indicate planned dissemination activities between this report and the next report.

14. Special Activities. Include any special or other activities that need to be reported, including efforts to reduce race and sex stereotyping in career choice and efforts to provide career education for handicapped persons, where these efforts are not reported under major objectives and activities.

15. Report Abstract *(include in final report only)*. Prepare a brief abstract of this report for use in communication with other career education practitioners and the general public. Abstract shall include all items under numbers 1 through 8 above and a brief summary of information under items 9 through 12 and 14 above. Abstract shall be no longer than 1000 words.

OMB APPROVAL NO. 29-R0224

FINANCIAL STATUS REPORT

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT
U.S. Office of Education

2. FEDERAL GRANT NO. OR OTHER IDENTIFYING NO.
G007700093

3. NAME AND ADDRESS OF GRANTEE ORGANIZATION

National Center For Career Education
P.O. Box 7815
Missoula,Mt. 59801

4. EMPLOYER IDENTIFICATION NO.
81-0359053

5. GRANTEE ACCOUNT NO. OR IDENTIFYING NO.
554AH70344

6. FINAL REPORT
☒ YES
☐ NO

7. BASIS OF REPORT
☒ CASH
☐ ACCRUED EXPENDITURES

8. PROJECT PERIOD (Month, Day, Year)
FROM 9 | 15 | 77 TO 9 | 14 | 78

9. REPORT PERIOD (Month, Day, Year)
FROM 9 | 15 | 77 TO 9 | 14 | 78

10. STATUS OF FUNDS	PROGRAMS - FUNCTIONS - ACTIVITIES						
	(1)	(2)	(3)	(4)	(5)	(6)	TOTAL
a. Total outlays previously reported	102659.81						
b. Total program outlays this period	49340.19						
c. LESS: Program income credits							
d. Net program outlays this period							
e. Total program outlays to date	152000.00						
f. LESS: Non-Federal share of program outlays							
g. Total Federal share of program outlays	152000.00						
h. Total unpaid obligations							
i. LESS: Non-Federal share of unpaid obligations							
j. Federal share of unpaid obligations							
k. Total Federal share of outlays and unpaid obligations	152000.00						
l. Total Federal funds authorized	152000.00						
m. Unobligated balance of Federal funds	0						

11. INDIRECT EXPENSE: a. TYPE OF RATE (Mark box)
☐ PROVISIONAL ☐ FINAL
☐ PREDETERMINED ☐ FIXED

b. RATE

c. BASE

d. TOTAL AMOUNT

e. FEDERAL SHARE

12. REMARKS (Attach additional sheets if necessary)

13. Certification - I certify that to the best of my knowledge and belief this report is correct and complete and that all outlays and unpaid obligations are for the purpose set forth in the grant award documents.

NAME: Dennis Niedermeyer

TITLE: Asst. Dir.

TELEPHONE: AREA CODE 406 NUMBER 243-5262 EXT.

SIGNATURE OF AUTHORIZED OFFICIAL

DATE REPORT IS SUBMITTED: 1/5/79

HEW-601T

ABSTRACT

On Sept. 15, 1977, the National Center for Career Education (NCCE) received a contract from the U.S. Office of Education, through the Offices of Career Education, to operate NCCE's Career Education Information, Training and Instructional Materials Systems.

The objective of the 1977-78 CEITAIMS proposal was to deliver career education assistance to career education practitioners by facilitating the flow of useable career education materials and resources across the nation. Lending aid to these career educators in utilizing these resources within their own particular circumstances enables these innovative programs to reach the students of the nation.

The National Center for Career Education has made great strides toward its goal of communicating career education on a nationwide scale. NCCE has received support from every corner of the nation in its work. Educators and lay people from state departments, counties, local board districts, colleges, and universities, adult and vocational institutions, business, labor, industry, the professions and special populations, including the handicapped, have utilized and applauded the services of NCCE.

There were two major activities to be pursued to reach NCCE's goal of communicating career education; (1) to operate its materials and educational services divisions at the

University of Montana, and (2) to engage in activities of "national significance". The former was carried out so that the feasibility of NCCE might be demonstrated and the latter was carried out so that the viability of NCCE might be demonstrated.

The original NCCE design for the national delivery of career education was to establish a network of Affiliate Centers across the nation beginning with ten at Participating Universities. However, NCCE was awarded an amount representing half the original request from the Office of Career Education and thus had to make decisions which would move NCCE away from several of its intended goals, including the establishment of the ten Affiliate Centers. One prototype Center was established at the University.

The goals were reached in several distinct ways. Over 5500 educators and lay people were informed as to the existence of NCCE and its work in career education. The three major categories of services which the Center was requested to provide are 1) training, 2) identification of appropriate instructional materials, and 3) national communication of career education implementation strategies and practices.

Specifically, in the category of training the Center provided assistance to several types of institutions: school districts, colleges and universities, businesses, correctional institutions, labor organizations, state departments of education, etc. The NCCE method is a unique approach to local curriculum development which combines high impact training strategies and techniques, with access to NCCE's national bank of career education materials. This process enables participants to develop and implement curricula with a career education emphasis. Although the training for each institution is based on common elements, each training package is individually designed to specifically meet the institutional situation and needs.

All of the above stated operations are continuous and simultaneous functions of NCCE along with the ongoing process of trying to identify what is happening in career education at the federal, state and local level across the nation.

The second major activity pursued in communciating career education nationally has been involved in efforts of "national significance." Activities termed by NCCE to be of "national significance" were those conducted by NCCE in states other than Montana. Obviously, having been able to acquire career education materials from all states falls into this category. Generating computer services utilized by many people around the nation also contribute toward this goal.

NCCE staff attended, spoke, trained and presented at many different types of functions and meetings in many parts of the country.

With the acquisition of career education programs and information comes much data which is tangential to NCCE's work but which is becoming an increasingly important series of NCCE by products. For example, NCCE was requested by several state directors of career education to help them locate national resources relative to career education model programs and practices, career education centers, and leading personnel in career education for inclusion in their state plans. Thirty-six states volunteered to share their information with each other through NCCE.

The following pages relate the effort to date of the project staff in fulfilling the scope of work necessary to deliver career education through the "Career Education Information, Training and Instructional Materials System" project.

The scope of work breakdown follows the format of 1) a description of the major scope of work items; 2) and a narrative of each subcategory including description and major activities.

Introduction to Major Activities

On Sept. 15, 1977, the National Center for Career Education received a grant from the U.S. Office of Education, through the Office of Career Education, to operate NCCE's Career Education Information, Training and Instructional Materials Systems.

The objective of the 1977-1978 CEITAIMS Proposal centers around delivering career education assistance to career education practitioners by facilitating the flow of use--able career education materials and resources across the nation. Lending aid to these career educators in utilizing these resources within their own particular circumstances, will enable these innovative programs to reach the students of the nation.

The National Center for Career Education has been able to do this through a broad base career education process. The process is aimed at involving institutions representing business, labor, industry, education and government who have impact upon the education system of the nation and who must be involved to insure implementation of career education.

NCCE's involvements with these institutions center around NCCE's training package which utilizes NCCE's computerized data bank. This computerized process allows NCCE to call upon existing career education materials that have been collected through the acquisition efforts and are applied to that institution's needs.

The following pages relate the effort to date of the project staff in fulfilling the scope of work necessary to deliver career education through the "Career Education Information, Training and Instructional Materials System" Project.

1. Maintenance of Present Divisions

a. Materials Processing

The materials processing division of the National Center for Career Education has several maintenance functions to perform.

- maintain acquisitions, contact persons, exchange agreements, and communications networks
- maintain the active libraries and work-in-process libraries
- maintain active data files and software data files which are on computer media
- maintain record keeping systems in all departments
- maintain staff performance levels through staff development activities and reference manuals maintenance.

The maintenance operations of most libraries require a significant amount of labor, NCCE is no exception. Serving and communicating with its users on a national basis is a time consuming effort just to maintain. NCCE maintains its cadre of contact persons, and its cadre of parties with which it is exchanging materials - both libraries and individuals.

NCCE maintains its national lending library, its document reproduction service, and its computer search services. NCCE maintains library service support for its prior in-service trainees. NCCE libraries which include: the "sampler libraries," the "Initial computer search libraries" and the historical library created under prior CEITAIMS operations "Prototype II." NCCE maintains its logistical operations of shipping/receiving by which materials are received and delivered.

NCCE maintains many record keeping files to account for physical inventory. The inventory of library materials has records maintained for receipts, initial classification, binning, full classification, data recording, check-outs, returns, duplication, and evaluation. Production records are also maintained.

NCCE also maintains personnel staff development records and maintains the documentation and reference manuals which personnel are to use in the performance of their assigned work.

NCCE also maintains close communications with the other NCCE divisions so as to keep current with the latest trends in Users' needs and to plan library activities accordingly.

b. Curriculum and Quality Control

The Educational Services Division is constantly striving:

(1) to expand its training curriculum offerings

(2) to maintain quality control of the various training curricula through continuous field testing evaluation, and revision.

The procedures for accomplishing these two tasks are explained in a later section of this report (Implementation of Procedures for Training Curriculum Improvement and Adaptation).

2.0 Maintenance of Management Information

DESCRIPTION

The operations and processes for the systems developed and planned during the prior years were instituted and are currently being maintained.

Management and staff development of NCCE under the "CEITAIMS" project involves a closely integrated process coordinated by the Director and the three Assistant Directors. The organization and its operations are identified on the following pages. The process requires constant monitoring and review. The policies and procedures are updated to respond to changes in operations dictated by changes in student needs.

2.0.a Policy

The National Center conducts meetings to set policy. The annual Board meeting was held on the second Wednesday of June in Missoula, Montana. Other meetings of the entire Board can be called by the Chairman or a majority of the directors. Interim business is transacted by the Executive Committee.

2.0.b Set Policy

DESCRIPTION

The Board of Directors is the policy-making board for the National Center for Career Education.

At the annual meeting all required policy was set and interim policy set by the Executive Committee was ratified.

MAJOR ACTIVITIES

Other than at special Executive Committee meetings, no major policy was established at the annual meeting on the second Wednesday in June.

2.0.c Procedures

The National Center operates as a separate and distinct entity. The management system is therefore self sufficient and operates separate from any existing agency, institution or organization. The National Center operates its own processes for the entire management system.

Therefore NCCE needs to continuously review and update its operational policy.

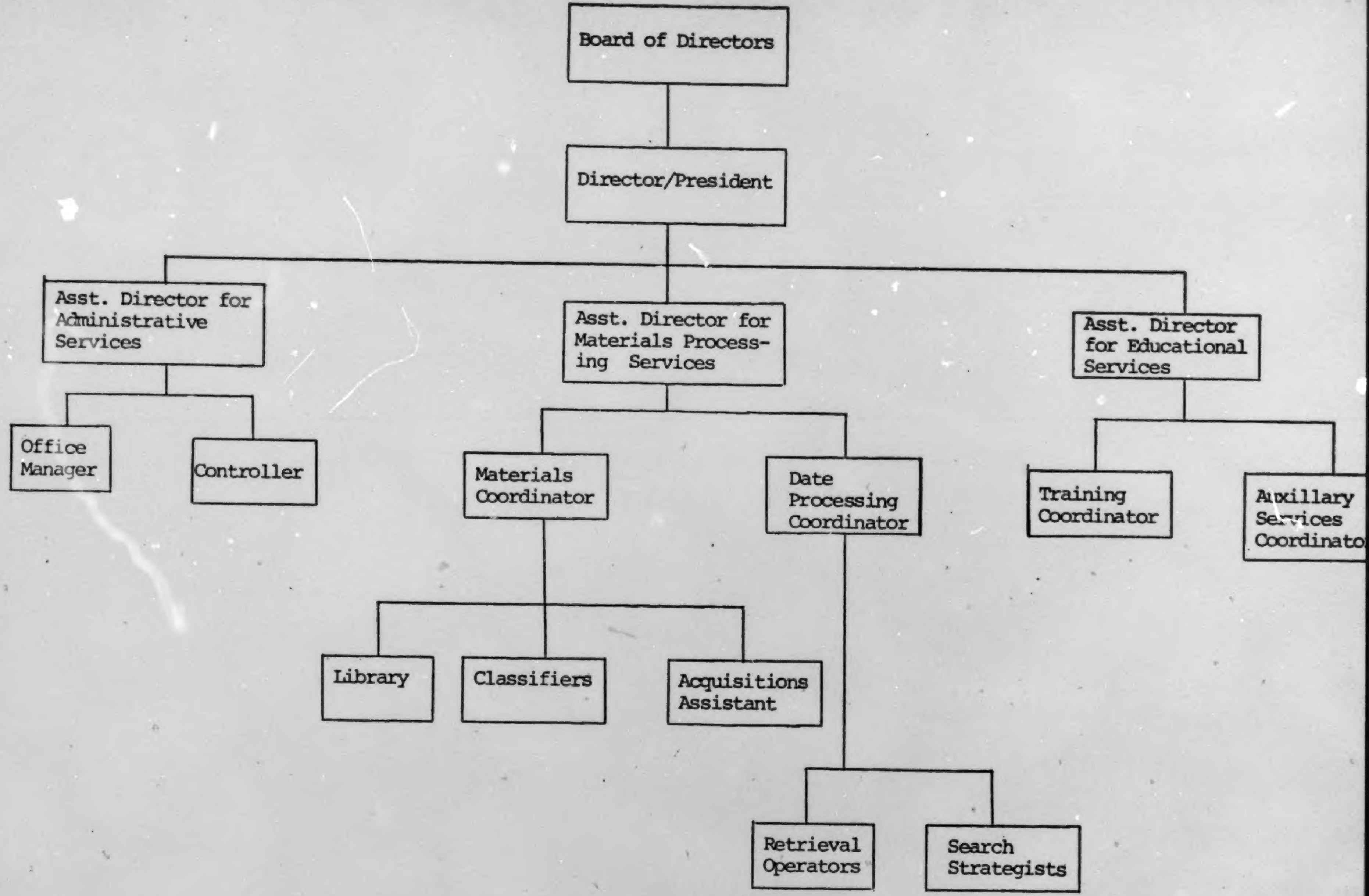
Reporting

The management of the National Center is the responsibility of the Director and is achieved by outline of the functional areas, establishing the line of authority and responsibility, and maintaining constant communication through reporting information to feed a decision-making process. The organization chart as outlined depicts the structure and the lines of authority and communication.

MAJOR ACTIVITIES

The management of each functional division is coordinated through the assistant directors. The communication mechanism among functional divisions and to the executive director is accomplished through weekly staff meetings with the director and his assistants and monthly progress reports from all staff.

The internal processes for management, fiscal and staff development systems are constantly monitored through internal staff progress reports and external evaluators. This input is then used as a basis by which revision and improvement can be initiated. In addition, reports are filed with the Secretary of the State of Montana, HEW Semi-annual and annual project reports, and IRS yearly Informational return.


Board of Directors
Director/President
Asst. Director for Administrative Services
Asst. Director for Materials Processing Services
Asst. Director for Educational Services
Office Manager
Controller
Materials Coordinator
Date Processing Coordinator
Training Coordinator
Auxillary Services Coordinato
Library
Classifiers
Acquisitions Assistant
Retrieval Operators
Search Strategists

3.0 Instructional Materials

DESCRIPTION

The National Center for Career Education, under the CEITAIMS Project, is continuing its efforts to collect, classify and store materials and thereby make the materials available to career education practitioners. The thrust of this activity is aimed toward support of training in career education curriculum design and making needed materials available to the practitioners in training.

The NCCE materials system is designed to serve as a national repository of career education materials. But the materials are not just archived; they are computer searchable to match the needs of the educators being trained. The NCCE training services exist to help the educators adapt the materials for their maximum effectiveness in classroom use.

The activities and systems in the NCCE instructional materials processes are designed to link educators/institutions and their education needs to the materials which are relevant to their needs.

NCCE, through CEITAIMS, has enhanced its library operations and procedures again. In response to user feedback, and also to streamline already tested operations, NCCE has designed, tested, and implemented major revisions to prior operations; the new operations are termed "Prototype III." Prototype III revisions have impacted every materials processing function. The enhanced procedures have allowed for many new materials capabilities to be delivered to practitioners; most notably the new identification and materials dissemination products called NCCE's Indexes for Teachers (NIFT's) and mini-libraries.

The Prototype III procedures have also allowed for enhancements in locating and identifying materials for Users - both in manual methods as well as in the computer-based methods of searching materials. The following is a description of the materials services products.

LISTS OF AVAILABLE MATERIALS

THE NCCE INDEX FOR TEACHERS SERIES-Computer Identified Career Education Instructional Materials Lists: materials in broad categorical areas (e.g. career education mathematics instructional materials for use in the primary grades). These listings can be used to order the materials that interest you. A free schedule of proposed NCCE Index for Teachers offerings is available on request. Topics for the indexes are chosen based on the types of material NCCE notices are frequently requested. All materials listed on NCCE Indexes for Teachers are non-copyright and available from NCCE for 30-day preview. Forty topic indexes were produced in the series.

CUSTOM COMPUTER SEARCHES -
The Custom Computer Searches are computer printed listings which are custom prepared for users who find need for information which is not available in the NCCE Index for Teachers series. The result of a Custom Search is a computer printout listing materials appropriate to users' search request, both copyright protected and non-copyright products can be identified. The non-copyright materials listed on a Custom Computer Search listing is available from NCCE under the same terms listed above in the description of the NCCE Index for Teachers. The copyright protected materials listed on

a Custom Search listing are often available on 30 day loan from NCCE (unless currently on loan to another user); the source can be contacted for previewing or purchasing of copyright materials identified by NCCE Custom Computer Searches. A Custom Computer Search Packet with instructions for requesting a custom search is available on request.

LIBRARIES OF ACTUAL MATERIAL

NCCE MINI LIBRARIES, which are libraries of career education instructional materials, are available from NCCE to anyone interested in obtaining a collection of approximately 50 pieces of career education material assessed as among the best of NCCE's locally produced holdings. Four different NCCE Mini-libraries are available at this time. They are the Mini-libraries for:

Primary Grades K-3,
Intermediate Grades 4-6
Junior Grades 7-9, and
Senior Grades 10-12

Each of the above four Mini Libraries contains approximately 50 pieces of material with suggestions for activities and ideas for infusing career education in subject areas of Math, Social Studies, Science, Language Arts and Guidance and Counseling. If demand creates a backlog of orders, users will be advised as to predicted delivery date. A NCCE Mini Library Examination Kit is available from NCCE to anyone desiring more detailed information about the Mini Libraries.

REFERRAL

If your request for material cannot be met by NCCE's materials service, we will, whenever possible, refer user to another source of materials, or NCCE can contact another source on users' behalf.

National Center for Career Education

CEITAIMS ANNUAL REPORT

September 15, 1977 to September 14, 1978

cope of Work Item 3.0 Instructional Materials

DESCRIPTION	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep
Production Statistics													
Acquisitions (identify and collect)													8009
Classification													4975
Computer Bank information for library operations													2511 818
Disseminate Materials through training activities													1230
Major Events													
"Prototype III, Library Procedure" Design, test; implement hire and train library personnel, computer bank updates (Quarterly) Initial computer search produced. Computer tie-in (design and test).													

3. a & b Identify and Collect Materials

DESCRIPTION

The acquisition of materials is an ongoing process that requires communications and reviews of existing literature to identify career education materials. Upon identification, the material is requested from the sources so identified.

MAJOR ACTIVITIES:

The collection of instructional materials has entailed several plans being formulated and executed in acquiring materials for the clients of the NCCE training systems.

-Newsletter and media solicitation
-Contact person plan
-USOE funded project contact person
-State coordinators identification plan
-Known-materials direct request plan
-Target groups solicitation plan
-Personalized services and follow-up
-Training contact and feedback plan
-Referrals plan
-Show casing materials
-Materials exchange agreements

Each plan has its unique advantages and disadvantages, yet the quantity of materials and quality of those receipts to date are impressive considering the limited budget, manpower, and time the acquisitions has been operational in support of training.

National Center for Career Education

CEITAIMS ANNUAL REPORT

September 15, 1977 to September 14, 1978

Scope of Work Item 3.a & 3.b Identify and Collect Materials

DESCRIPTION	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Se
Production Statistics													
Correspondence													20
Acquisitions Receipts													82
Refine continue existing acquisitions planning													
Implement new acquisitions planning													
• Materials exchange agreements (libraries and individuals)													
• Materials exchanges OCE													

3.c Classification of Materials

DESCRIPTION

NCCE, having collected career education materials from across the country, rigorously classifies it so that it may be accessed and retrieved through the computer search process.

MAJOR ACTIVITIES

Building upon last year's efforts in developing a classification system, NCCE has improved the classification process and has approximately 4994 items classified as of September 15, 1978.

The Materials Classification Operations have been significantly revised,based upon analysis of information derived from the planning and testing phases of NCCE's existence.

The classification manual has been thoroughly revised,based upon many inputs: classifiers, Users, test group recommendations, librarians, encoders, cost time analysis, and search effectiveness analysis. This revision yielded a primary manual which was converted into a classification manual. Enhancements to prior procedures also include several newly developed support products which are being utilized in classification processes.

Several new minor steps have been implemented in order to keep documents manually searchable at all stages of processing.

Another innovation to respond to User needs is a priority grid mechanism - this grid is a dynamic prioritizing mechanism based upon User requests and feedback.

National Center for Career Education

CEITAIMS ANNUAL REPORT

September 15, 1977 to September 14, 1978

Scope of Work Item 3.c Classification of Materials

DESCRIPTION	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep
"Blue-card" and Bin Materials													8009
Assess Materials													6500
Classify Materials													4975
Sub-classification Processes													
• Repackage (materials)													120
• Retype (pages)													540
• Duplicate (pages)													711,900

3.d Materials Quality Control

Under CEITAIMS, materials are being assessed on a wide range of characteristics and for various levels of curriculum infusion of career education concepts. The results of the assessment process allow for top priority processing of the "best" documents into "mini - libraries" for the trainers to take to their training sites as exemplary materials.

The assessment process also yields a category of documents called "initial search" which the trainers can use to inform the trainees of other materials, which are not in the mini- library, but are readily available for NCCE and may well be worth investigating depending upon their needs.

Documents which are assessed positively yet are not deemed " mini " or "initial" status are processed onto the computer based library ahead of those which are not as positively assessed.

There has been terrific response to the mini-library concept, and very good response to the initial computer search concept and improved response to the computer supplemental search service.

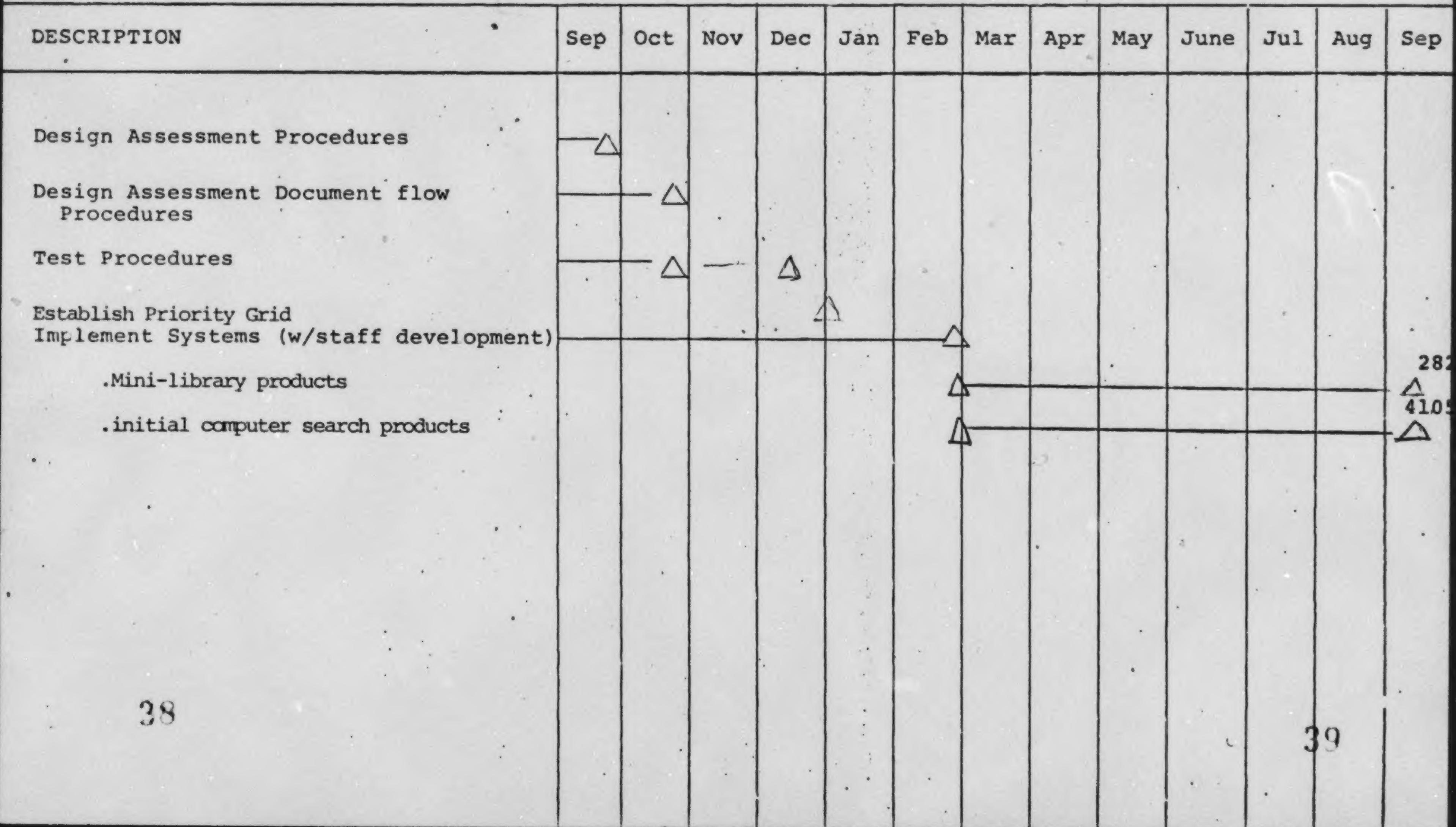
Each of the materials or information identifing services of NCCE has an evaluation device built in. Quality control is not only an internal process, it is also externally validated by NCCE Users. Users are requested to evaluate process and product in order for NCCE to know what to change to best serve User needs.

National Center for Career Education

CEITAIMS ANNUAL REPORT

September 15, 1977 to September 14, 1978

cope of Work Item 3.d Materials Quality Control



3.e Maintain Resource Center and Data Bank

DESCRIPTION

The physical materials collected and stored at the National Center for Career Education represent materials from across the nation. The maintenance of the resource center involves the ongoing library management including filling requests for materials checked out, materials control and initiating duplication processing.

MAJOR ACTIVITIES

The maintaining of the career education materials library and services has been a continuing operation. Activities involved in maintaining the library include:

- constant inventory control operations
- evaluating User feedback for either procedural or materials modification
- scheduling and staging of materials for timely delivery to the training sites or to other Users in the Nation
- monitor and upgrade the materials serviceability for Users

The maintenance function also entails shipping and receiving functions to support training. This system has been designed and is successfully supporting training materials flow. Refinements are expected and as our experience with training sites continues, the feedback from training will be used to make necessary modifications to the system.

The control of documents released for duplication is also handled by the maintenance function. Discrepancies concerning materials verses encoded information about the patterns are also monitored by the maintenance function.

National Center for Career Education

CEITAIMS ANNUAL REPORT

September 15, 1977 to September 14, 1978

Scope of Work Item 3.e Maintain a Resource Center and Data Bank

DESCRIPTION	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep
Data Bank													
(conversion of files and software from old to new computer) 180 files (conversion manuals and training)													
Searches													
• Supplemental searches processed													237
• Initial Computer Search listings distributed													4102
• Supplemental search packets distributed													346

National Center for Career Education

CEITAIMS ANNUAL REPORT

September 15, 1977 to September 14, 1978

Scope of Work Item 3.e Maintain a Resource Center and Data Bank

DESCRIPTION	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Se
Resource Center													
Physical collection of materials maintain													
Prototype II library (documents)													251
Prototype III library (documents)													800
Materials Check-out, check-in, ship and receive (documents)													
Training services support													123
Field services support													78
Document Preparation - Covering/ binding													643
Materials duplicate: ship for users to retain (individual orders)													40

3.f Disseminate Materials Through Training Activities

DESCRIPTION

The NCCE training programs are supported by the NCCE materials library. Library materials indentification services include:

- Initial computer search listings which "catalog" various available documents according to broad instructional areas for various grade levels of learners.
- Supplemental search services which are custom computer assisted searches for materials which the trainees need.

The NCCE library not only identifies materials for the trainees, it also delivers all requested products into the hands of the trainees.

Each training site has its own uniqueness; each training site has unique training programs prepared for the trainees; likewise materials support is different for each training site.

Some sites use the initial computer search listings mechanism, some use the sampler library mechanism, some use the supplemental search mechanism, some use all of the services available.

For the training sites the materials processing division has served users directly with supplemental searches, yielding materials identified by computer assistance and delivered into the hands of the trainees career education instructional materials. Some of the training sites are not yet completed and the materials division has yet to complete its request.

4.0 Implementation of Quality Control Systems

DESCRIPTION

The evaluation of the Career Education Information, Training and Instructional Materials System has a systematic approach to evaluation including process and product evaluation and external evaluation by the Montana State Education Research Division, (Bozeman, Montana) who evaluate overall effectiveness of the system and aid in the improvement and modification of the evaluation design.

The evaluation design is an effort to assess the quality and efficiency of the delivery processes by Users of the system. The evaluations are broken down by the service components of training and computer search and retrieval delivery.

INTERNAL EVALUATION

The training is evaluated through a series of session evaluations that assess the content and quality of the instruction. The session evaluations are an immediate feedback mechanism for evaluating the process.

The product evaluation is determined by matching the initial assessed needs against both the session evaluation, the curriculum materials developed and the summative content and quality evaluation of the training package. The instruments that are used are a combination of needs assessments, session evaluations, and User evaluation.

The computer search and retrieval system is evaluated through a User-completed materials applicability card. This card indicates the applicability of the material sent in response to the request.

MAJOR ACTIVITIES

The evaluation of the CEITAIMS is an ongoing process that is continuously reviewed and updated. NCCE's 1977-78 performance evaluation concentrated on three areas: 1) the collection, classification, identification, and distribution of materials; 2) improvement of existing training models, and 3) recruitment of users and maintenance of national contacts.

A system evaluation was solicited from Montana State University, Bureau of Educational Services and submitted by Al Suvak, Project Evaluator, and focused mainly on computer acquisition techniques, current evaluation instruments, and the Mountain Bell evaluation plan. (See Appendix A.)

A specific project for the Kenai Borough School District in Alaska was evaluated by the Division of Educational Research and Services at the University of

Montana, Dr. Lyle Berg, Director. This was an inservice training project for teachers and evaluated by the participants. (See Appendix B.)

A comparison of seven career education systems was conducted by David Elliot of Educational Products Information Exchange Institute. This report is an invaluable source for measurement of NCCE's capabilities and resources. Mr. Elliot commented on the model of NCCE in the area of career education:

> "One national center (NCEE) is set up to serve as an advocate for the post-1974 Office of Career Education approach to education and is active in assisting users at all levels in the clarification, development, and implementing of programs as well as in the exchange of instructional materials."

Internally, NCEE staff set up a general scope of work to be accomplished and estimated dates of completion to guide an on-going evaluation process. Substantial improvement was made in every area as will be demonstrated in the following evaluation.

II. Materials

The installation of the Dec. 20 Computer system at the University of Montana required not only revision of existing programs, but also development of new ones. In this transition NCCE was able to immensely improve its computer search materials. Printouts became more readable and irrelevant material was eliminated. A Table of Contents was initiated and cited as "an immeasurable addition" by the Montana State evaluator.

Of the seven systems studied in the EPIE report, "NCCE is the only one that specializes in career education exclusively," and the strongest in terms of a "two-day flow of information, products, ideas, and materials as to needs, problems and potential solutions." NCCE's on-going internal processes have established this two-way exchange.

Some concern has been expressed about a "possible overlap of service" between NCCE and ERIC, but EPIE finds "There is no inefficient redundancy in the sense of two or more systems duplicating one another by offering identical information or services to an identical group of users."

NCCE maintains a database of instructional materials which is accessible to users only. NCCE also makes these materials available directly to users who do not participate in its curriculum development activities (i.e. through custom searches, initial search listings, and mini-libraries).

The following items from Appendix C are of particular interest.

Chart on Comparisons of 7 Systems

Page 51 - Only one system primarily for career education.

Page 53 - NCCE is strongest in "exchange."

Page 55-56 - Comparison of NCCE & ERIC Career Education.

Page 61-63 - Concerns about ERIC & NCCE.

Page 66 - Only one (NCCE) is set up to serve as an advocate of post 1974 OCE approach.

III. Training

The main thrust of NCCE is local level curriculum development in career education (pre-kindergarden through grade 12+) through in-service staff training and the utilization of materials from other schools and projects as well as those developed in the course of training. NCCE also carries on shorter orientation and clarification sessions in career education. The development and/or implementation of programs and practices is a constant activity.

NCCE conducted a six session in-service program for faculty members at the Kenai Borough School District in Alaska this past year. These workshops were aimed at specifically increasing the awareness of the participants' concepts of career education by providing them with feasible curriculum development techniques for such concepts. The participant evaluation data found that the specific objectives for the project were met and all participants were satisfied.

Dr. Lyle Berg of the Bureau of Educational Research and Services, University of Montana, project evaluator, did suggest that the evaluation instruments used need to be more specific to better identify the unique characteristics of the program. He also suggested that a follow-up evaluation be done.

A general comment of the teachers was that through the workshop they became more aware of the students' needs which created movement toward student centering in their instruction. In answer to the question, "How has this course affected your thinking about education?" one teacher wrote:

> "I have felt very positive about the use of the unit design as teaching strategy and felt that this course confirmed my feeling. Certainly we all need more expertise in developing class or school objectives. There is just too much teaching by use of a page by page approach without definite ends, and the kids get lost as do goals."

Many of the teachers felt the workshops were a good basic introduction to the concepts but actual curriculum writing was lacking. Many registered for the sessions specifically for the curriculum aspect. They did, however, highly rate the statement "Emphasis Appropriate to Request" on their final evaluations.

NCCE and Mountain Bell initiated a project entitled

"Cooperative Design for Career Education." The primary objective of the project was to provide training for Mountain Bell and School District personnel in developing career education instructional units to be used in classrooms with students. The participants rated the project as very good and relevant to their needs. (See Appendix D.)

The Resource personnel gained insight into the complications of the educational process and appreciated the efforts made by teachers in preparing their students for their visits. Many of the teachers became more aware of the unique potential for using resource people in their classrooms.

Students felt the materials used were interesting and relevant and rated all aspects of the sessions as "good" or higher.

One major concern stemming from this project was the inefficiency of the participant evaluations. Dr. Berg felt the instruments needed to be more specific and that a follow-up evaluation should be considered. Montana State expressed concern over the fact that no control group was used. They suggested that a "norming point" should be established to evaluate results.

In addition, NCCE has revised and expanded the assessment documents to improve the evaluation process by better identifying the relevant changes that are to be measured.

Other major activities involving evaluation include the on-going process of gathering relevant information from internal project activities and translating that information into useable bases for decision making.

EXTERNAL EVALUATION

The assessment of the evaluation process is being performed by Montana State University Education Research Division;who,are reviewing our existing instruments, suggesting revisions, validating the evaluation processes including data gathering, compilation and analysis. The Montana State University Education Research Division being third party evaluators submitted horizon markers and a final report on their findings.

REVIEW EVALUATION PLAN WITH PROJECT OFFICER

The form and substance of NCCE evaluation has been reviewed by the project officer. Suggestions and recommendations offered by the project officer have been included in the evaluation plan being performed by the third party evaluators.

National Center for Career Education

CEITAIMS ANNUAL REPORT

September 15, 1977 to September 14, 1978

Scope of Work Item 4.0 Implementation of Quality Control Systems

DESCRIPTION	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep
4.a Internal Evaluation													
Evaluation and Planning Meetings (Executive)		△	—	—	—	—		—	—	—	—	—	△
Design Evaluation instruments for training utilization	△	—	—	△									
Materials evaluation solicitation	△	—	—	—	—	—	△						
4.b External Evaluation													
Meeting with Third Party Evaluator		△			△								
EPIE evaluation (comparative)													
4.c Review Evaluation Plan with Project Officer													
Correspondence with Project Officer	△	—	—	—	—	—	△						
Final Report													△

5.0 Implementation of Procedures for Training Curriculum Improvement and Adaptation

During the previous operational year (1976-77) the National Center developed, field tested, and gathered evaluative data on a basic long-term (60-90 hours) in-service model. Assessments of the field tests and evaluation results indicated: (1) that the sixty (60) hour model needed only minor enhancement in activity selection, but (2) that the ninety (90) hour model was not feasible due to excessive time commitment on the part of the participants. As a result the staff analyzed the evaluative data specifically to identify:

(1) activities that should be deleted
(2) areas where new or different activities should be included.

The staff then selected new activities which seemed more appropriate based on the assessment data and as described below.

DESCRIPTION OF TRAINING MODEL

The training model utilized by NCCE is built around the following components: (1) clarification of career education and its many implications; (2) localization of career education; (3) development of instructional materials and methodology; (4) identification of resource materials; (5) development of a sequential curriculum with a career education emphasis.

Clarification of Career Education

Since the formal advent of career education in the early seventies, many definitions of career education have been offered. NCCE assists local school district personnel in considering these various definitions, analyzing their ramifications, and arriving at a definition compatible to their own district.

Localization of Career Education

NCCE assists local school district personnel in localizing the global dimensions of career education by: (1) an examination of the local school district philosophy; (2) an analysis of local student needs; (3) writing a number of career education concept statements to serve as parameters for curricular development.

School district personnel are helped to examine their own school philosophy and to identify major points of emphasis that are complementary to the definition of career education previously adopted. Such an experience allows both teachers and administrators the opportunity to discover that career education is not inimical to the aims and purposes of the school district. Thus, the support base for career education efforts in the district is enhanced.

School district personnel are helped to identify the needs of their own student population by a process of personal observation and interpretation.

School district personnel are assisted in the writing of career education concept statements to serve as parameters for future curricular development. These concept statements are written in light of the major points of emphasis derived from the district philosophy and the students' needs as identified from personal observation and interpretation.

Thus, the school personnel will construct a local frame of reference through which to view career education in their district. By way of analogy, this frame of reference takes the form of a triangle, one leg of which is composed of school expectations derived from the school philosophy, the second leg being composed of student needs as observed by the school personnel, the third leg being a number of career education concepts.

Development of Instructional Materials and Methodology

The crucial issue for teachers in the understanding of career education is being able to translate that understanding into meaningful learning experiences for students. NCCE's approach to curriculum design assumes not only the need for meaningful and relevant student experiences, but further assumes that these experiences must be directly related to the delivery of the regular instructional program. Consequently, NCCE assists participants in utilizing the previously developed career education concepts as foci for organizing and planning instructional units. By utilizing this strategy the teacher is able to directly link the delivery of academic skills and knowledge to the lcoal expectations and students' needs (basis of the career education concepts), thus creating instructional units with career education emphasis.

Identification of Resource Material

NCCE assists school personnel in learning how to access the many and different resource materials housed in the NCCE data bank. In addition to commercial materials, teacher prepared materials, program guides, and many other resources from all fifty states are available to recipients of NCCE services. These materials are accessed by: (1) ordering specific materials as described in NCCE's Initial Search Listings which categorize materials in terms of grade level and subject matter; (2) ordering materials from the results of a computerized search conducted on a special topic.

Also, school personnel are assisted in identifying and using resources in the local community: realia (items common to the home but rarely considered as as educational in nature), human resources, and sites to visit.

Development of Sequential Curricula

NCCE helps school personnel to project a series of units based on some fifteen concepts. Thus, each teacher can outline a total year's curriculum based on these units. Simple arithmetic demonstrates that each unit will consume, on the average, twelve school days (180 school days ÷ 15 units = 12 days per unit).

The revised sixty (60) hour model is again being field tested and evaluated in multiple sites during the current year. When all the field tests are completed and the evaluation data is compiled, the process of revision will again be repeated.

One adaptation of this model has been tested in the Kenai Burrough District (Alaska). The particular focus in this adaptation was to assist the district in developing and structuring their secondary curriculum around career education principles. The assessment of this adaptation is being conducted by a third party evaluator. (See appendix). When this final report is completed, the recommendations will be utilized as the basis for possible revisions. A second model developed and tested during the previous year was the Telephone Company/Educator Training Program. Assessment of the Alburquerque field test (March 1977) indicated a need for some major structural revisions in this model in terms of:

(1) time factors
(2) content
(3) addition of pre-planning components
(4) end products

Over a period of several months the National Center staff, in conjunction with telephone company specialists and educators, has completely restructured the model. Currently the model is being field tested and evaluated in four (4) separate locales. Early indicators from interim assessment indicate a high level of success with the revised model. Upon completion of the initial field tests, the evaluation results will be analyzed to determine if further revisions or restructuring is required.

A third major model that is operational is the Career Development Program (summer experience for CETA youth). This program brings CETA youth onto the University of Montana Campus for a week to participate in a seris of activities and experiences which enables them to better know themselves and to choose appropriate directions for their lives. The findings and recommendations from the third-party evaluator are utilized in revising and improving the curriculum.

a. Production (new models)

During the transition period (July-September '77) and the current operating year (1977-78), the National Center has developed and field tested five new training programs:

(1) LEA Administrators (one week)

(2) One-day career education program planning

(3) State Career Education Planning Council (one week)

(4) Master Trainers

(5) Career Awareness Program in-school (CETA youth)

LEA ADMINISTRATORS

This one-week workshop was field tested in Lander, Wyoming as a component of a year long Title IV (C) project. The model is actually an adaptation of the sixty hour training model. The format was modified so that major emphases were given to:

(1) definition aspects which led to a draft of a district career education position paper

(2) selection of career education concept statements as a basis for curricular development

(3) the development of an implementation plan with administrative roles, functions, and timelines delineated.

Little emphasis, other than orientation and explanation, was given to instructional materials and methodology.

A third party evaluator is assessing the effectiveness of this model. When the assessment is complete, findings and recommendations from the evaluator will be utilized to determine possible revisions.

ONE-DAY CAREER EDUCATION PROGRAM PLANNING

This model has been field tested in four districts (one in California, one in Alaska, one in Montana, and one in North Dakota). Although individualized for each situation, the common components in this model include:

- (1) career education definition
- (2) localizing procedures:
  - (a) student needs assessment plans
  - (b) relating career education to local instruction
- (3) implementation strategies
  - (a) task analysis
  - (b) personnel role and function definition (related to task analysis)
  - (c) time-line projections
  - (d) required resources identified and allocated.

Each of these sessions was evaluated by the participants. Data from these evaluations will be utilized to determine possible revisions.

STATE CAREER EDUCATION PLANNING COUNCIL

This model was field tested in Wyoming with their state coordinating council. The major components of the model are:

- (1) delineating the programmatic implications of the State Plan
- (2) developing in-service models for orientation session with:
  - (a) LEA administrators

(b) LEA teachers and counselors

(c) Business/Industry/Labor resource agencies and personnel

(3) identifying exemplary career education materials for dissemination to LEA's.

The workshop was evaluated by the participants with strong indications that this model is very effective. The ultimate assessment, however, will be the feedback (collected, compiled, and analyzed) by the Wyoming State Coordinator as the various products of the model are utilized. At the conclusion of this operating year, consultations with the State Coordinator will provide the bases for assessment of effectiveness and the determination of possible revisions.

MASTER TRAINERS

The National Center has developed and field tested a model to train "Master Trainers" in the sixty hour model. Approximately fifty California Master Trainers were involved in the field test. Although the training session was evaluated and suggestions for revisions have been compiled, the final revisions will not be made until the Master Trainers have been engaged in the delivery and completion of the sixty hour model. Data from the assessment of its delivery will further aid in determining need for possible revisions.

CAREER
AWARENESS
PROGRAM

The Career Awareness Program is an adaptation of the Career Development Program with several important new facets:

(1) services are delivered to CETA youth in their home locale

(2) services are collaboratively planned by local and state agencies

(3) services are delivered through coordinated collaboration by these same agencies

(4) training for adults representing these agencies is provided to assist them in planning and delivering these services.

The implementation of the model is to be assessed by a third-party evaluator. The final report from this assessment will be utilized in determining the need for revisions.

6.0 Recruiting Users

PROCEDURES

The National Center utilizes a series of methods regularly to acquaint potential users with the Center's services:

Monthly newsletter:

information about specific materials, training programs, and current activities (circulation: approximately 2,800 organizations, LEA, SDE, and individuals)

NCCE Contact Persons:

approximately 80 individuals, representing the majority of the states, who are kept abreast of NCCE activities and services and who are sharing this information with educational institutions, organizations, and individuals in their geographic areas.

Meetings and Conferences:

(Attendance and Presentations) Whenever possible NCCE staff attends and makes formal and/or non-formal presentations at National, regional, and state conferences. These activities include the educational as well as the business/industry/labor communities.

Visitations

As NCCE staff travel around the nation they generally schedule visits with key individuals (e.g. state coordinators, LEA personnel, B/I/L personnel, etc) to explain NCCE services and how to obtain them.

Responses to Inquiries for Assistance

Almost daily NCCE receives requests for specific information or assistance. In addition to responding to the specific request, NCCE utilizes this opportunity to acquaint the requestor with the totality of NCCE's services.

ORIENTATION

In addition to the printed narratives which explain NCCE's individual, specific services, the Center conducts, upon request, one-day planning and orientation sessions. The purpose of these sessions is two-fold:

(1) to create in-depth understanding of the nature and the procedural aspects of NCCE services,

(2) to provide the interaction between NCCE and the Users required for tailoring NCCE services to meet the specific needs and circumstances of the Users.

SCHEDULING

The National Center is committed to providing services to Users when and where it is conveniently appropriate to the Users. Services, therefore, are generally scheduled to be delivered at User on-site locales to coincide with their time preferences.

7.0 Maintain a National Dialog with Career Educators

DESCRIPTION

In order to keep informed of current trends in career education and to inform educators across the country of our services, it is required that the National Center for Career Education maintain a dialog with career educators nationally.

In retaining national contacts, under CEITAIMS the NCCE has been able to better respond to requests for current information and resources in career education. In addition, the activities as outlined in the following pages indicate how NCCE has been able to disseminate important information about itself and career education in general.

7.a Participate in National Conferences

The National Center for Career Education has participated in many conferences of National significance. The Conferences include:

- Director of NCCE presented to the HEW/DOL Conference in San Diego, CA, Dec. 16, 17, 1977
- Director of NCCE presented to CAWEE Conventionists San Diego, Oct. 13, 15; San Jose, Nov. 3, 4
- Director of NCCE presented at Nevada Experience-Based Career Education Statewide Conference Sept. 28, 29
- Director of NCCE presented to the 28th annual Indiana School Boards Association Conference, Indianapolis, Indiana, Oct. 5, 6, 7
- Director of NCCE attended OCE funded Project Directors Meeting in Washington, D.C.

These represent but a few of the major conference involvements by NCCE.

7.b Maintain Contact Person Network

The National Center has continued to keep informed the many formal and informal contact people it receives across the nation. This includes mailing updates on information to be disseminated. In addition NCCE has identified additional individuals by state who would be effectively utilized in the dissemination of career education information and materials. Plans will be developed to utilize these individuals.

7.c Pursue Activities that may Generate Centers

The National Center has continuously strived to develop funding and program configurations that would allow for the expansion of centers. To date the most important activity has been in California where 40 master trainers received further training in career education. These 40 master trainers would act as a core of staff to be utilized in providing support services to school districts.

7.d Provide State Career Education Coordinators and Career Education Project Directors with a Computer Search

The National Center for Career Education supplied each project director with a series of initial searches (as described in 3.0). In addition, NCCE supplied each State Career Education with the same type of searches and an option for a search based upon a specific topic area.

7.e Strengthen Linkages with Existing Information Systems, State Career Education Coordinators, and OCE Funded Projects

The NCCE, Inc. has planned the use of existing information data based for acquisition and back up reference sources.

The NCCE is continuing to use the information contained in information centers to augment its coverage of career education relevant materials.

- searching of the ERIC
- established reciprocal search exchange agreement with Information Resource Centers

The NCCE is planning on strengthening its information base and avoidance of duplication by analyzing the already available information alongside the NCCE information system.

- analyze NCCE client(s) needs with respect to existing information systems contents.

NCCE is collecting information about existing systems and services and often is referring information searchers to these centers when appropriate. When these requests are found to be frequent, then the NCCE plans to formalize information sharing linkages with the appropriate agencies.

7.f Involve Business, Labor, Industry, and Government

In order to obtain the needed input and involvements of business, labor and industry, the CEITAIMS Project is actively involving representatives from each of these areas to help implement and disseminate career education.

Major involvements to date include planning activities in conjunction with American Telephone and Telegraph, General Motors, Inc. and the AFL-CIO.

Involvements with AT&T have begun in two directions. Mountain Bell has begun a program of exchange between their personnel and university faculty, a program which NCCE is agreeing to transmit to other Bell Telephone operating companies.

Also, because of Mountain Bell's commitment to the support of career education implementation at the local level and the need to train its personnel on "how to" actualize this support in an effective manner, Mountain Bell has reached an agreement with the National Center for Career Education to design and deliver training programs for appropriate Mountain Bell personnel. As described in Scope of Work 5.0 the National Center has been involved in federally funded project "MECCA" which is designed to create a collaborative effort between Business, Labor, Industry, Government and schools. NCCE has been utilized as a major resource for the planning and implementation of the project.

Project Personnel

Personnel

Listed below are the names of the staff members of the National Center for Career Education involved in "Career Education Information, Training and Instructional Materials" Program. Many of the staff were involved in prior years and, therefore, were able to bring a backlog in excess of 12 man years of experience to bear on the current project.

NATIONAL CENTER FOR CAREER EDUCATION

Dr. Vincent D. Barry - Director

Madgie M. Hunt - Curriculum Materials Services Coordinator

Dennis Niedermeyer - Assistant Director for Administrative Services

Kenneth Murray - Assistant Director for Materials Processing Services

James N. Christensen - Bookkeeper

Helen McClain - Materials Classifier

Harrell Guard - Assistant Director for Education Services

Quentin Schwartz - Training Center Coordinator

Claudia Fahey - Keypunch Operator

Dian Doheny - Work Study Student

David Clapsaddle - Trainer

Karen Ostermiller - Work Study Student

Lance Edwards - Work Study Student

Maxine Leonard - Graduate Assistant

Maria Lupo - Work Study Student

Anna Mutterer - Graduate Assistant

Dissemination

Dissemination Summary

The National Center for Career Education, Inc. (NCCE) under the CEITAIMS Project grant from the Office of Career Education has been broadening its dissemination of career education information and materials in a number of ways. During the prior six months, dissemination activities have included expanding the people contacted through the newsletter by 20%.

Designation of contact people across the country who can respond to individual's requests for information about the National Center for Career Education and NCCE's Career Education services add to the dissemination process.

These activities are over and above those indicated in Section 3.0 in which NCCE has responded to materials and information requests.

Special Activities

In the CEITAIMS acquisition process, bibliographies which contain references to non-biased materials are sought and materials are requested from them.

In the CEITAIMS previewing a great effort has been made to search written materials and audio-visual materials to ascertain any sex role stereotyping or racial bias in career education materials. This is noted on a special preview form.

All career education materials classified are scrutinized for sex role or racial bias using a guide constructed for this purpose. The guide uses data from USOE Title IX, the SEE Program, Houghton-Mifflin and EPIE. As new data is acquired, the guide is updated. A notation is made on the classification form to indicate the presence of bias.

Two pieces are used in the NCCE Training program to make the teachers aware of bias. "Examples of Discrimatory Ideas and Practices" and "Tips for Non-Stereotyped Teaching" are sheets which point to typical areas of stereotyping and give suggestions as to teaching methods which overcome it.

A constant effort is made to eliminate sex and race bias from the NCCE program. NCCE is working in cooperation with groups such as Project CHOICE in Waterville, Maine.

APPENDIX A

Montana State University
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Bureau of Educational Services

Serving the State of Montana

Evaluation: Final Report Submitted by Al Suvak, Project Evaluator

The main emphasis of this evaluation will be centered on three distinct areas: the computer acquisition system, the current evaluation instruments and the evaluation plan for the Mountain Bell Project.

Computer Acquisition

The computer acquisition system has undergone a revision as a result of two factors. In August, 1977, the University of Montana installed a new computer, the Dec System 20 Computer. This change in computers required not only revision of existing computer programs, but also the development of new ones.

The second factor was the need to make the computer printout more readable for the user and to eliminate irrelevant material. The main change was in a large reduction in the use of abbreviation, especially in the information category labels. Auth Pub became Author Publisher; Invy became Inventory; IA became Instructional Area; and LL became Learning Level. In some instances the subject area section was changed or expanded to provide clarity and readability. The new version also includes a table of contents which lists the titles and page numbers of all the material selected for each

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search. Over all, the revision is a vast improvement over the previous printout.

NCCE produced 4 printouts which demonstrate the differences between the old data bank (Prototype II 2110 citations) and the new data bank (Prototype III 673 citations). The first printout utilized the old data bank and original search strategy. The second was run on the new data bank and still used the original strategy. The third was the same as the second except that it contained a catalog style printing, listing only those fields which interested the reader. Both the third and fourth printouts were far superior to the first and second in clarity, readability and overall usability. The table of contents is an immeasurable addition. The first printout contained 51 citations. The second and third listed 35 and the fourth contained 44 citations. For the most part it is very difficult to determine the relevancy of the citations to a particular individual user. NCCE should request the user to submit an evaluation of the effectiveness of the search. The evaluation should be an ongoing project.

In-service Training Evaluation Instruments

The current evaluation instruments consist of one basic instrument which is altered for each session. Basically, the instrument contains 5 items with a 4 choice response continuum. One is labeled low and 4 is high. There is also a section for comments. It appears that the questions are constructed to measure 5 basic outcomes of an inservice program. The questionnaire for the first session attempts to evaluate the participant's understanding of education, the participant's conception of the implication of career education, the participant's confidence in his relationship to colleagues, and the effectiveness of activities and materials that were used.

In the opinion of the reviewer the instrument is very inadequate and any evaluation with it would be highly questionable. There are too few items to measure the 5 general outcomes. The items are ambiguous, general and complex. For example, the participant is asked to evaluate on a four point scale the item "Activities and materials used in this session were provocative, interesting and helpful." This item consists of 2 independent entities (activities and materials) and 3 evaluative criteria (provocative, interesting and helpful) which, at a minimum, make up six individual items.

There is no evidence of reliability or validity analysis. Some type of norming procedure is required to provide a basis for interpreting the results.

The development of evaluation instruments and methods is the first and basic task of a meaningful program evaluation. Not only is it necessary to obtain information about the knowledge and attitudes of participants in a training program, but it is vital to ascertain the extent to which the participants are utilizing that knowledge. It is also important to determine the effect the training has on the individuals served by the participants. Follow-up studies which include on-sight evaluation visitation are mandatory in order to measure the effectiveness of both the materials and training projects.

Montana Mountain Bell Project

In reviewing the Montana Mountain Bell project, two defects were noted. The first was the lack of some type of control group. The control group is necessary to verify that significant changes might be due to the training program. A control group could be selected from those instructors who have not been selected.

The second criticism is aimed at the evaluation instruments. The evaluation instruments in the Mountain Bell project are very similar to the ones used to evaluate the training programs in Alaska. There are too few items which hinder the attempt to discriminate between poor and good teachers. The items are too general and do not identify unique characteristics of career education programs.

In the opinion of this reviewer, NCCE has dedicated and talented people and is developing into an excellent service organization for Career Education. Evaluation seems to be their weakest area. I recommend that NCCE adopt an evaluation plan that will be rigorous and inclusive and faithfully follow that plan. It is important that all phases of the NCCE endeavors be evaluated and attempts be made to ascertain the effects of the programs on all recipient parties. The Evaluation Plan submitted by this Bureau could serve as a model for establishing such a plan.

APPENDIX B

EVALUATION

NATIONAL
CENTER FOR
CAREER
EDUCATION

University of Montana
Missoula, Montana

NCCE

NCCE In-Service Training Project
Kenai Borough School District, Alaska
1977-78

Evaluated by

DIVISION OF EDUCATIONAL RESEARCH AND SERVICES
Dr. Lyle Berg, Director
University of Montana
Missoula, Montana

UNIVERSITY OF MONTANA
DIVISION OF EDUCATIONAL RESEARCH AND SERVICES

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KENAI PENNINSULA SCHOOL BOROUGH DISTRICT

Personnel

Superintendent of Schools

Dr. Paul Gallaher, superintendent, Kenai Penninsula School Borough District, Alaska

Superintendent of Instructional Services

Dr. James Hall, superintendent of instructional services, Kenai Penninsula School Borough District, Alaska

Superintendent of Auxiliary Services

Mr. Donald Kirkpatrick, superintendent of auxiliary services, Kenai Penninsula School Borough District, Alaska

Superintendent of Operations/Vocational Education

Mr. Walter Ward, superintendent of operations/vocational education, Kenai Penninsula School Borough District, Alaska

School Board Members

Mrs. Carolyn Kannaba, President

Mrs. Sheila Owens, Treasurer

Mrs. Sandra Morris, Clerk

Mrs. Joyce Fischer

Mr. Carl Glick

Mr. Jerry Hobart

Mrs. Linda O'Brien

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I

INTRODUCTION

In-service Program Purpose And Objectives

Career education was the topic of a six-session in-service program offered to faculty members at the Kenai School Borough District in the state of Alaska. Conducted under the auspices of the National Center for Career Education located at the University of Montana at Missoula, this series of workshops was aimed specifically at increasing the awareness of the participants' concepts of career education by providing them with feasible curriculum development techniques for such concepts. The entire in-service program centered around seven major objectives:

1. Write a definition of career education;
2. Examine the local school district philosophy (or other comparable document);
3. Write a number of career education concept statements;
4. Identify a number of needs relative to the student population;
5. Compare the school expectations (item 2) with career education concept statements (item 3) and needs of student population (item 4);
6. Select a number of career education concept statements to serve as parameters for curriculum design;
7. Write a unit of study which delineates one of the career education concept statements.

The first session addressed itself to the first objective; the second session to the second and third objectives; the third session to the fourth and sixth objectives; the fourth session to the fourth, fifth, and sixth objectives; and the fifth and sixth sessions to the seventh objective.

Service Dates and Program Instructional Staff

The following outlines the dates of the in-service program sessions and the names of the respective instructors for each session:

Session	Date(s)	Instructor(s)
First Session	October 22, 1977	David Clapsaddle Harrell Guard
Second Session	November 18-20, 1977	David Clapsaddle Harrell Guard
Third Session	December 12-17, 1977	Harrell Guard
Fourth Session	January 9 - 14, 1978	Harrell Guard
Fifth Session	February 13-18, 1978	David Clapsaddle
Sixth Session	March 18, 1978	David Clapsaddle Quentin Schwartz

II

EVALUATION REPORTS FROM THE FIRST FIVE TRAINING SESSIONS

At the closure of each in-service session, the participants were provided an opportunity to formally evaluate the training which constituted that particular session. The following pages disclose the results of those evaluations as well as provide specific comments that were solicited from the participants during the course of each session.

Session I
"Setting the Stage"
Kenai School Borough District, Alaska
October 22, 1977

SESSION EVALUATION RESULTS

	Statement N=50	Rating Scale	Mean*
1.	I better understand the meaning of career education as a result of this in-service session.	x 1.........2.........3.........4	3.20
2.	I have a better conception of the possible implications for career education as it relates to an overall educational approach.	x 1.........2.........3.........4	2.82
3.	I feel more confident now in being able to explain to others the essence of career education.	x 1.........2.........3.........4	2.66
4.	I feel more comfortable in working with my colleagues in relation to career education.	x 1.........2.........3.........4	2.86
5.	Activities and materials used in this session were provocative, interesting, and helpful.	x 1.........2.........3.........4	3.00

*The mean ratings are based on a continuum of 1-4:
..One is low - of little or no value.
..Four is high - of great value, very helpful.

General comments concerning the session - "Setting the Stage"

--Very enjoyable. Wish I had this years ago!

--I am darn glad to have this opportunity to meet and be with both of you.

--It's a beginning.

--The afternoon session was much more interesting and worthwhile than the morning.

--Worthwhile!!

General comments concerning the session - "Setting the Stage", cont.

--Painless -- "Educational"-- Appreciate the care you've taken in the planning.

--Very interesting. A good learning experience.

--I needed this! The lack of stimulation around this area is frustrating! Keep in the action!

--I think this first session was an excellent way to begin. It sounds like it will be interesting--good job in presenting also.

--When I take a graduate course, I hope to gain more specific knowledge, methods or items which will be of greater help to me. I feel this session was too general and could have been covered in one or two hours.

--Wait and see.

--Very helpful!! I'm looking forward to the next session.

--I have been overexposed to the theory regarding career education. I'm ready for more specifics sooner.

Session II
"Local Expectations"
Kenai School Borough District, Alaska
November 20, 1977

SESSION EVALUATION RESULTS

Statement	N	Rating Scale	Mean*
1. I now better understand the nature and purpose of school district philosophy/goal statements.	35	x 1.........2.........3.........4	2.86
2. I now have a better insight into Kenai's district philosophy/goals.	35	x 1.........2.........3.........4	3.03
3. The major emphasis of Kenai's philosophy/goals are clearer to me as a result of translating them into concept statements.	34	x 1.........2.........3.........4	2.76
4. The film Foxfire had helped me to better grasp the potential for implementing career education concepts.	35	x 1.........2.........3.........4	3.40
5. The frame of reference for localizing career education for Kenai is beginning to take shape.	34	x 1.........2.........3.........4	2.79

*The mean ratings are based on a continuum of 1-4:
..One is low - of little or no value.
..Four is high - of great value, very helpful.

General comments concerning the session - "Local Expectations"

--Group discussion is very rewarding. I like the small group concept.

--Thanks again.

--It would be good to rewrite our local school philosophy.

--Good day! Hope we can sort out the District's verbiage!

--Better than last time. It is getting better all the time.

--This is a relative viewpoint. I have had a part in developing these philosophies and goal statements and don't feel that todays' program contributed that much to my basic understanding or appreciation. It did present some new possibilities or at least some slants not formerly appreciated as much as they could be. The discussions within our groups continue to be very interesting.

Session III
"Needs"
Kenai School Borough District, Alaska
December 17, 1977

SESSION EVALUATION RESULTS

Statement	N	Rating Scale	Mean*
1. I now better understand the total scope of student needs.	37	x 1.........2.........3........4	2.99
2. I now am better able to differentiate between wants and needs.	37	x 1.........2.........3........4	2.68
3. The case study "One Student's Point of View" assisted me to identify some needs common to many students.	35	x 1.........2.........3........4	2.89
4. The readings helped to clarify issues which relate to student needs.	38	x 1.........2.........3........4	3.23
5. The film "Cipher in the Snow" added insights about my role and responsibilities to better recognize and meet student needs.	39	1.........2.........3........4	3.43
6. I would rate this work session.	38	x 1.........2.........3........4	3.24

*The mean ratings are based on a continuum of 1-4:
..One is low - of little or no value.
..Four is high - of great value, very helpful.

General comments concerning the session -

--Glad to have some chance to voice views on high school.

--Again, small groups much better.

--How can we convince other staff members a change is needed.

--This was better!

--Having a lot of Educational Psychology background not a lot was new, but some had been forgotten. Looking forward to doing some work now.

--These sessions were quite valuable. Plan to extend my attempts at discovering wants and needs. I thoroughly enjoyed both meetings. Thanks for the FoxFire film!!

--The film helped give me an awareness of the definite unseen and sometime unrecognized needs!

Session IV
"Concept Clarification Toward a Unit"
Kenai School Borough District, Alaska
January 14, 1978

SESSION EVALUATION RESULTS

Statement	N	Rating Scale	Mean*
1. I now feel that the creation of the local frame of reference was appropriate in order to select concept statements for curriculum development.	24	x 1........2.........3.........4	2.83
2. The example units of the curriculum model were helpful as I began to design and develop my own unit.	24	x 1.........2.........3.........4	3.33
3. The seed units assisted me in formulating plans for developing a unit.	20	x 1.........2.........3.........4	3.15
4. I now see how the infusion approach will help me to give appropriate emphasis to both subject content and career principles.	22	x 1.........2.........3.........4	2.77
5. I intend to utilize the unit I will be developing with students.	24	x 1.........2.........3.........4	3.31
6. The training provided through the in-service sessions has given me a better working knowledge of curriculum development.	24	x 1.........2.........3.........4	3.31

*The mean ratings are based on a continuum of 1-4:
..One is low - of little or not value.
..Four is high - of great value, very helpful.

General comments concerning the session - "Concept Clarification Toward a Unit"

--We're changing our basic concepts, right?

--Even more important--we finally came up with a way for us to communicate in developing our curriculum. Felt yesterday's class was a burn.

--The really real world is still a long ways away with Junior High kids.

Session V
"Resources"
Kenai School Borough District, Alaska
February 18, 1978
Session Evaluation Results

Statement	N	Rating Scale	Mean*
1. The "Junk" exercise helped me to think of many instructional resourses readily available.	37	X 1.........2.........3.........4	2.73
2. I now better understand how I can use people from the community as resources for enriching classroom instruction.	37	X 1.........2.........3.........4	2.92
3. I am now more able to identify and use possible sites in the community for meaningful field trips.	38	X 1.........2.........3.........4	2.97
4. I can better visualize how various community resources can be incorporated into the regular instructional process.	38	X 1.........2.........3.........4	3.11
5. This session has hepled me to more fully think of resources I can use in the development of my unit.	38	X 1.........2.........3.........4	3.03

*The mean ratings are based on a continuum of 1-4
..One is low - of little or no value.
..Four is high - of great value, very helpful.

General comments concerning the session - "Resources"

--I use these so much anyway - but didn't want to mark low just because I already do.

--The parts of this puzzle are coming together after today and yesterday - Good Show.

--This session gave me the best picture of what is involved in "Unit" planning.

--It has been good 5 months.

General comments concerning the session - "Resources," cont.

--It took longer for me to see the "big picture" of our activities during this session - in comparison to previous sessions.

--Lots of original ideas.

--Very similiar to many former experiences I've used as a teacher.

--Too much repetition - not really a valuable session.

III

SIXTH/FINAL SESSION EVALUATION RESULTS

General Evaluation Findings

Under the direction of Dr. Lyle Berg, Director of the Division of Educational Research and Services, the School of Education, University of Montana, at Missoula, an indepth assessment of the overall career education in-service program was conducted during the sixth and final evaluation session. The first device employed consisted of nine questions administered to all the program participants. The nine questions were as follows:

1. How has this course affected your thinking about education?
2. How has this course affected your practice of education?
3. How has your participation in this course affected your current students?
4. How do you feel it will affect your future students?
5. What activities, resources or experiences in this course were particularly good or helpful?
6. What activities, resources or experiences were particularly poor?
7. How satisfied were you, personally, with the total course?
8. Would you recommend this course to others? If so, to whom, and why?
9. Anything else you can think of . . . ?

The following pages disclose the varied comments solicited from the participants via these questions.

Session VI
Final Evaluation
Kenai School Borough District, Alaska
March 18, 1978

1. How has this course affected your thinking about education?

--Opened up some avenues that I had not considered important.

--I have felt very positive about the use of the unit design as teaching strategy and felt that this course confirmed my feeling. Certainly we all need more expertise in developing class or school objectives. There is just too much teaching by use of a page by page approach without definite ends, and kids get lost as do goals.

--Has introduced new/improved/recently developed ways to organize the content of a school curriculum.

--It reinspired me to think of the whole development of the person, and keep it foremost in my mind as I teach subject matter.

--I know I have to take a different attitude and do more planning with career opportunities in mind.

--Education is undergoing a change back to basics. One should be flexible but teach in the manner you feel comfortable.

--It has reinforced the idea that education must relate to life-styles, now and in the future

--It has reinforced my thinking that all subject matters must somehow be interrelated to reach the ultimate goal of creating a life-style for each student.

--Perhaps broadened my appreciation of the meanings applied to "career" education.

--How: 1. By seeing and hearing other teachers and administration in the district.
2. By reminding me of concepts and methods of teaching and learning.
3. By new combinations of ideas about the presentation of material.

--Maybe my growth as an English Teacher colors the basic objectives (subjectives?) I'm trying to teach. I'm not teaching a group of future English Teachers - I'm teaching students who will need basic skills to do, or be a multitude of things.

--Reinforcement and review of concepts that we all knew we should have been using and do most of the time.

--That much more must be done to get career education into all of the school curriculum.

--Stimulated it.

--It has helped me to become more critical toward preparation and presentation of class materials.

--This course has broadened my complete scope of thinking. I now realize how interrelated all areas of education are.

--Not much- the openness didn't cause me to work through the ideas so it had little impact.

--I am continually frustrated by the lack of structure and specific goals in education.

--My thinking has not been changed. It has satisfied my ideas.

--It geared me up.

--I look at career ed. as total education of the student, rather than as a separate area.

--Yes. Helped see others' views and a good exchange of problems of ideas.

--It was a good review of things we learned a number of years ago and helped us look at them again in a different light.

--Made me more aware of possibilities and flexibility within my area.

--No, just reconfirmed some basic ideas I've had.

--New approaches to educational concerns are good and it reinforces my outlook that stagnant programs hurt and new ideas tend to rebuild or cause a rebirth.

--Basically, it has shown me that what I'm presently doing in my classroom is good, but definitly needs expansion to show relationship to career development

--It has reinforced in my mind the need for individualization.

--Realize areas of weakness. Work on answering the questions "Why learn this?" Resources are unlimited and full of fun!

--Just reinforce and reviewed my ideas on needs/wants and meeting those in education.

--It's given me more awareness of multi-discipline unit packages.

--More indepth thinking regarding the needs of the kids.

--Looking at the needs of children and how the curriculum can deal with the needs.

--This course has reaffirmed my feeling--which originated in college--that at least half of all education courses are generally inapplicable to the real business of teaching.

--More awareness of career emphasis in education.

--Made me aware of the needs of all the discipline of education.

--Reinforced my feelings that ed. is a broad concept and each individual learning situation, to be effective, must be tied into the student's relevency - his total life experience.

--It has reinforced previously held convictions concerning curriculum development, scope, and sequence, making teaching relevant.

--I have learned how the relationship of different areas in the academic field are related through activities, resources, and concepts.

--Made me realize we can no longer appeal to students solely on the basis of traditional methods- "This relates to you". . . .not "This is good for you".

--It has given me a better view of the long range effects of education.

--Yes: Made me more aware of humanistic needs
Individualization
Organization

--The main outcome of this course has been for me to reevaluate my philosophy of education and how it applies to the Kenai Penninsula Borough and to the lifestyles of its residents.

--It has revealed and impressed in me the idea that education is what is left after we have forgotten more of what we have learned. It has also shown me how education is a life long process and that it should be geared to an emphasis of a full and satisfying life involving the acquisition of skills, awareness of self, awareness of others and that education is a shared proces

--It made me more knowledgeable regarding many alternate methods and aspects available for educational purposes.

--1. This course stimulated thinking about students, their needs and movement toward student centering.
2. This course gave me some new data to add to and change my philosophy of education.

--It has shown me areas in which I can connect a lot of my concerns for studen into a package. I am also seeing ways in which I can work closer with teach

2. How has this course affected your practice of education?

--Better planning.

--Will help us to get off our butts and start helping kids.

--I back off just a bit more to actually assess my students - not so much in ability but in terms of need.

--Yes, I've taken ideas about career relatedness and worked them into math line

--Only to use it as a model display matter.

--I guess perhaps the main thing is that it has made me zero in on specifics rather than teaching or exposing students to generalities.

--I have had to think about drawing experiences in the classroom out into the child's world.

--Able to perceive a better picture of overall Language Arts program.
Need for validity.
Diverse areas of English, eg. vocational and college bound.

--Gave me an opportunity to put into practice the "concept" idea of teaching a unit.

--I have tried to employ my unit with success.

--More "Hands On" activities.

--More attention to concept teaching, resources and activities.

--Not at all.

--General awareness of the concept of career education being applicable to my subject area - area of instruction.

--Reinforced it and I needed that! Concepts are "where it's at".

--It has had little effect to date. However, the basic design and content should have positive effects in the very near future in terms of future curriculum development.

--It has broadened my scope of ideas for outside resources that could be utilized in my class activities.

--Very little- the guides are similar to the unit method which I have used before.

--I work on a personal level, with my counselees, helping them to think about life wants and to relate their goals to those.

--I think it has helped me to be better organized.

--I have started to develop some "outside tactics" for general math classes.

--As a librarian, it has not directly affected my performance in the classroom.

--It has caused me to be more concerned about its wants and needs of each individual student such as his need to be loved, belong to a group, understanding, need for information, effective or productive citizenship and the need for self esteem and variable activities to head each student toward the objectives and concept. It has also shown me how to incorporate the four rules of life into each unit- vocational, avocational, family, and citizenshi

--Helps to develop a program which is more interesting to the student.

--My practice has become more divergent. I am feeling a need to become more convergent. I will in time.

--I am a counselor- I hopefully have broadened my approaches to students.

--Not a great deal as the course taught in our school is an individualized, hands-on type of course.

--An effort to communicate to teachers the need for use of priority goals which are communicated to those being instructed has occurred in my school. A teacher made unit which spells out such priorities and bears teacher planning effort provided so much more of a teacher's commitment is just invaluable.

--Can't honestly say it has changed my practice but it has changed my planning for two major activities coming up.

--I have attended more to the students' psychological needs as well as their mental needs.

--I have been more critical of the way I react to the slow learner, to students' needs in general.

--At this point this course has not directly affected my practice of education, although I can see ways in which I might help others in their practices

--None.

--I have not really changed the way I teach.

--I've thrown out some of my "favorite" things that aren't as relevant to the 7th grade student as I wish they were!

--Gave me an opportunity to practice with teachers and students than discipline within the content of a subject.

--To try and convince more teachers to use career education in their teachings.

--Has pointed up the value of coordinating Borough philosophy with what actually goes on in the classroom.

--I had to take a critical look at my personal efforts in the classroom.

--I now attempt to involve many more concepts and ideas into my teaching. My teaching is geared more to the "human or personal approach."

--None.

--It has made me more sensitive to all student needs.

--No

--At this point- not much.

3. How has your participation in this course affected your current students?

--It hasn't.

--They have a more sensitive and understanding teacher.

--I may be more in sympathy with them and their problems.

--None

--My students are becoming more involved in activities because they now see the relationship between the academic and the practical survival skills.

--Yes, many that were not actively involved have become interested in class routine.

--Not significantly, but I'm working on it.

--More self-planning - more exchange of ideas.

--Will help to look at kids as individuals.

--I have turned more to that which is applicable and basically necessary.

--Not a whole lot yet! I'm still in planning stages.

--It hasn't.

--Right now, I guess it has made me realize that all their needs aren't being met. Now I have to try to fulfill that obligation.

--Students are being exposed earlier to career choices and values choices.

--I have searched for individual objectives. Still searching for a way to interest all students.

--My current students probably aren't affected since I haven't really changed any of my philosophies.

--They seem to enjoy a project with a different twist- a little of everything.

--More "Hands On" activities.

--Only through the teachers I work with.

--Not at all.

--I have used some ideas from brainstorming with other teachers, some successful, some just o.k.

--I have put more emphasis on individual needs of my students.

--Reinforced it and I needed that! "Concepts are where it's at."

--To date, it has not, but again, it will begin next year.

--I have brought in some guest speakers from Kenai courthouse, and took the kids to see the action in a courtroom. I will be pulling community resources more often into my classes as the kids were enthused.

--Very little.

--I work on a personal level with my counselees, helping them to think about life wants, and to relate their goals to those.

--With the development and use of my unit I think it has helped me bring subject areas together for some students. Many now can see how math, science and language arts help each other.

--Not a great deal since I have only started in one class and I find it difficult to correlate this material to advanced classes, i.e. algebra II, trigonometry, etc.

--It has caused me to think of the students and where they are in their choosing of a lifestyle and what I can do to guide them.

--I am presently (this second semester) preparing units incorporating concepts, topics, objective statements, objective activities - both demonstrative and supportive (reading and watching filmstrips, movies and active participation such as interviewing). I am also beginning to use resources such as garbage space sticks, dead resources such as commentaries, obituary column, etc. I have now realized there are different ways evaluating than the usual test. I will have students do more evaluating of units and internalizing.

--Gives me confidence in ability to communicate knowledge in given subject (in classroom).

--I think they have benefitted.

--It has served to frustrate them. I don't have the concepts or my delivery system down smoothly yet.

--With the design of the course currently teaching, this has really not helped much.

--Students feel the mark of teaching by design rather than by accident of convenient pages available in a text. I would say that improved teaching has resulted in students with whom I have taught as well as other teachers whose teaching I have influenced.

--None.

--They are happier, more motivated.

--My feeling for my students has helped to bring about a closer relationship with certain students that I was having difficulty with.

--In the few situations where I am directly working with students on a daily basis I am attempting to do things where by they arrive at answers and conclusions on their own. I am the "facilitator"?

--At this point, it has not affected current students but I can see ways in the future where I could apply various principles should I develop independent study programs in research.

--I can't say that it has.

--I have not changed the way I teach.

--I wish I didn't have to answer this. I hope they're not suffering too much with my fumbling and my attempt to make it "better" for them.

--Forced me to evaluate a unit - so hopefully extended my participation to their participation.

--That the use of community resources can be very valuable to them.

4. How do you feel it will affect your future students?

--The future students will gain from the use of more career education activitie

--Probably the same way.

--Will help improve teaching for all kids.

--Better education, more perspective.

--I am confident they will benefit from my experience in this class.

--Should give them more practical application.

--If I teach on a secondary level again, I'll be more careful in selecting objectives.

--It will tie together a fragmented program and afford some semblance of order, resulting in improved instruction.

--I will be able to plan in an organized manner my activities and resources together in an organized sequence in teaching general concepts.

--If time allows, I can slowly build up units in various classes on special topics.

--I will try to incorporate these ideas into my classes. The lesson plan approach, I don't know about yet.

--I hope it will affect them in a positive way. They will get more career originated units than they have in the past.

--I don't know, much will depend upon the type of use other teachers will request from the media center.

--I hope I will be more aware of needs of students and their wants and that a school has a greater function than dispensing information. I will try to use the ideas of Coleman etc. I will try to use the steps of learning - awareness, interpretation, and application of education and will make concepts universal, indicative and applicable.

--Hopefully, this will enable me to assist teachers on a broader spectrum.

--Plan to employ in the future.

--Hopefully the business of education will become meaningful and enjoyable.

--I feel it will have a positive effect.

--I hope positively.

--More sensitive.

--That remains to be seen.

--Little.

--They will be involved in a better sequence of meaningful experiences.

--I hope to expand our individualized program so that individuals and groups may relate daily learning to the community in Soldotna.

--No.

--With a lot of hard work, hopefully I will be able to direct my students to think along the lines of careers in the future and not rely only on the present.

--Students will be exposed almost constantly to the relevency of all knowledge toward their individual wants.

--Plan to work on scope and sequence and provide better program for all. Maybe I won't worry so much about my seniors who graduate.

--My future students perhaps, will see more of a relationship in all the studies as I'll plan my units carefully with more of an overveiw in mind.

--I hope to produce other multi-unit packages in the future.

--Very positively.

--There will be changes.

--Very little.

--Remains to be seen - more followers will be required.

--I will develop individual plans and lessons so that a student may begin studying at his or her existing level and work to specific goals.

--Hopefully it will:
1. Promote their thinking about themselves
2. Give them ability to have opinions (critical thinking).

--Some improvement in the way some units are being taught to meet the students' needs more.

--Interdisciplinarian efforts will be encouraged to a greater extent. Better teaching by established goals should be a definite gain.

--The current curriculum revision project in KPBSD has revived a good start with this course. A basis has been established to provide continuity and standardization.

--I'm going to analyze what I teach and modify or drop concepts that are above their developmental level, so they can grasp it.

--Positively - Teachers need interaction with other teachers on a regular basis.

--If I am able to think more and act more with the ultimate goals and concepts of the district in mind, hopefully the students will get a better basis for appreciating learning.

--It will be beneficial if the individualized programs are established.

--It probalbly won't.

--I think (feel?) it will affect future students because of the curriculum changes which are coming in the future. The changes might be in the form of scheduling, course content and learning environment.

--Right now I feel it will have a definite positive effect. If I can get my head out of the clouds, maybe they can see my face.

--Would hope that it would continue to improve instruction which would affect future students positively.

5. What activities, resources or experiences in this course were particularly good or helpful?

--Interaction of the discipline and exchange of resource materials.

--Group discussions. I feel we talked about things we needed to talk about.

--The format for documenting the teaching of a 'concept' is a good form. I plan to ask teachers to add that completed format to their course descriptions. This is a lengthy process and will require some time.

--The practice of setting up the unit given the matrix was good. It gave the best appreciation of the problems in correlating Borough goals with classroom practice. The film session was similarly thought provoking.

--"The Junk Exercise" made me realize that most everything can be a resource. The "Cemetary" made me realize how well you can interrelate various subject matter using the same resource.

--I hope all of them will be of help sometime, but I know I get emthusiastic initially and then it is easy to fall into familiar patterns. The matrix idea should be helpful and the "Junk Exercise" indicated that there are more resources around us than seen apparent initially. The group work was valuable too.

--1. The introductory sessions - good to help open up your thinking.
  2. Discussion groups throughout the class.
  3. Films dealing with feeling for students.

--Group dicussion and minds of fellow educators.

--Unit design construction was extremely valuable.

--Interaction with the other educators in the subject matter area.

--Brainstroming with large and small groups. Learning of outside activities as related to classroom activities.

--Efforts to encourage teachers to look at students as individuals. Films were good. Activities in which the groups were involved in doing things.

--I believe it was covered in unit 4, the film on the accident. Getting to know your students better.

--The one activity of curriculum building, for the unit which referred to above, was the most helpful (Multi-unit packages).

--Teachers and administrators taking time to talk about needs, goals, objectives, community perceptions, etc., and how they all relate to curriculum.

--The only real value of this course was to interact with other teachers, to hear what they are doing and to discuss with them the direction education should take in this district. That interaction was not based on the class material, in general, and in most cases did not even grow out of the class activities, but was interaction which would have happened at any faculty gathering.

--Chance to "rap" with the "outside world" and educators of man levels and subject areas.

--The matrix and handouts.
Session #5 was excellent
Session #4 was to fast - I missed some of the concepts.
Careeer education: A definition and class time that went along with it.
Small groups and a teaching style which was the same way as the content suggested we teach.

--I liked the discussion.

--The only thing I was impressed by was the activities relating to students' needs - especially emotional. I liked the tear-jerker special "Cipher in the Snow."

--Brainstorming and actual contact with other teachers in our own area.

--1. Look at needs vs.wants.
2. Working as groups was fun - at times.
3. The idea of using a unit then looking at other factors.
4. Movies.

--The organization of thought and ideas into a meaningful and logical system.

--"Cipher in the Snow" was probably the MOST beneficial! I've been working closely with several ciphers!

--Enjoyed the different ideas and the comradery. All activities, resources, and experiences were positive.

--Many of the handouts were very good. The movie was especially good.

--The general format for creating a unit was good and usually workable.

--Realizing resources were everywhere from a cemetery to a college science building.....from a dill pickle to a textbook or hubcap.

--Learned techniques to encourage other teachers to all work together rather than in their own classroom.

--The homework assignment was most helpful because it required me to put on paper a plan of attack. I really enjoyed sharing all the ideas of my group members. Also the movies were good ("Cipher in the Snow").

--The grid working up educational units which will be turned in for critical analyzing by you and your staff.

--The unit level work with an organized approach via objective structure, etc.

--The discussion and interaction with teachers and other educators.

--Brainstorming and small group discussions, Cipher in the Snow. the importance of recognition of each student even the shy quiet and slow student.

--Getting input from other members of this class as to other activities and resources that can be used.

--Assessing needs and behavior.

--Film-Fox Fine.

--Layout and organization of curriculum, classes of subject matter.

--Harold Guard and Dave Clapsaddle and Quintin Schwartz are neat resource people. I hope we meet again. The socialization in session one particularly, the model (triangular window) to perceive Career Education, Cipher in the Snow, concepts session, expectations session, needs assignment, Fox fire movie, their modeling and sensitivity.

--1. Objective starters
  2. The use of the resources around us
    a. junk bag
    b. measure things in the room

--First session on brainstorming the affective and intellectual attributes of a teacher. Also, the session where we used "garbage" as a means of resource generated ideas.

--Group discussions (philosophical) with people throughout the peninsula.

--The resource activity related to a cemetary and community resources.

--About the 2nd session - when we went into the needs for the future - adaptability and flexibility to meet changing conditions.

--Being led to the 15 basic "needs" of mankind.

--Writing the unit. The introduction activities to help you relate to other people in your group. Dave and Harold coming to our school talking with students.

6. What activities, resources or experiences were particularly poor?

--Some time was wasted.

--The first two or three sessions were too slow.

--Many ideas were covered in the course, to list specifics would be difficult.

--Not really sure the "garbage" activity related too much to the concept of "career education".

--Too slow moving.

--The "dinky" little games that were played or we were involved in.

--Introduction sessions prolonged - getting down to work - actual unit design, etc., came too late for optimal development.

--None.

--The sessions when only a few teachers showed up.

--The graveyard exercise was a good idea, but not for our particular area since it is not particularly suitable in terms of availability, weather, time, etc.

--The cemetary was good the first night but too much (dragged out) for the second evening.

--Going through the process of each part of the unit was painful but necessary time element of this process.

--None.

--I think some of the early sessions were not relative to the task.

--I feel the entire course lacked structure and direction. There was great deal of wasted time, no discussion of objectives.

--The time spent on Maslow was very poor. I left only knowing I wanted to know about his theory, and that we had just sped on by - not good.

--The written.

--Most of them were too boring, repetitive, and duplications of previous class. The garbage exercise was disgusting.

--I feel the garbage exercise.

--We used groups far too much. The first couple of times far too much time was wasted.

--None.

--Graveyard did become morbid! Good idea, but too long I felt!

--Some were "dragging" but never poor.

--In too many instances I found the small group sessions bogged down, mainly because everyone was unsure of themselves and what they are trying to do.

--Perhaps sessions should have been more compact to solve the same learning stages.

--None.

--I didn't enjoy the joking around in the first session.

--I did not identify any activities that I felt were notwithstanding.

--I felt we were too slow getting down to the "meat" of the course.

--None.

--None.

--It was difficult to come up with objectives, etc., for a unit on cemeteries or funerals, etc.

--Sorry, but graveyards sure turned me off.

--Was lost in the first two meetings as to objectives.

--None.

--I do not think anything was poor. I had a feeling we could have used more large group interaction.

--The "method" of instructing the grid appears useful in general math classes, but tried to do it for an advanced math class and really found myself at a loss, so maybe.

--Really appreciate small group work.

--Slowness in moving to a curriculum development model.

--None.

--Too much time wasted in small group work, rather than getting to the meat of the matter in class and meditating about it individually.

--For me, the output required for the units "earned" but I wanted the units, and am interested in bettering education.

--Kansas jokes.

7. How satisfied were you, personally, with the total course? N= 44

				4.34			
very dissatisfied				X			very satisfied
	1	2	3	4	5	6	

There were 44 total responses to the question producing a mean of 4.34.

What factor contributed most to your feeling this way?

--A course like this one mostly reinforces and reviews what we already know and have been trained to do.

--The course in general caused me to have an awareness of the concept of career education - most of the activities are similar to those of a good method program. Brainstorming with teachers from other areas of instruction and relative to our own areas were interesting.

--Felt it was slow in starting off. The materials should have been distributed a month ahead of time instead of the day it is used.

--Not enough specific content - too general of an approach - too many "Kansas" stories.

--There is a practical application of what was learned.

--Too much repitition in many areas and not enough on identifying the actual needs and how to meet these needs. Not enough enthusiasm.

--The first two sessions.

--My own personal change in attitude dealing with career/English.

--Culmination of the unit.

--The exercises; writing a unit; communicating with teachers of all areas - subject-wise.

--There were times when I was not sure where we were trying to go. It helped me to design a unit but did not fulfill my expectations as far as designing a curriculum.

--The greatest thrust of the class for me was feeling for my students.

--Interaction with fellow educators with diverse thinking.

--Slow start.

--I don't feel that I'll use these materials or the information resulting from the course because I feel that I already have "a better way." My present practice incorporates the same considerations but is easier to accomplish. Much of the verbiage in education seems superfluous and this was one instance. To set up al courses using this approach in its entirety seems too involved and time consuming.

--The amorphous nature of the course.... There was no disucussion of specific methods or materials. The language of philosophy is generally vague and this class relied too heavily on it: eg. What on earth does "self awareness" mean?

--Relaxed attitude of instructors.

--Lack of time spent on the subject matter and some very negative students = 5. Good teaching, good content and new information = 6. I wanted a bit more depth on subject matter.

--The instructors.

--Lack of structure, lack of specific goals and accomplishing anything.

--Lack of struture - a lot of, I feel, trimming and not really getting down to the hard facts.

--Nothing ever happened. I kept waiting for a point. I missed it because it's now over!

--The systems for organizing ideas and concepts - activities etc.

--I think we need, more than anything, a shot in the arm! KPBSD has to be one of the most stagnate areas of the world (educationally).

--The presenters were human, knowledgeable and presented in a manner that was palatable.

--My feeling is that there were far too may loose ends.

--The involvement that was sought for each participant seemed to bring up a lot of jargon. I was looking for ideas to adapt that were already working!

--Instructors, relaxed atmosphere, little pressure, other people in class.

--I didn't know what to expect, so came expecting too much.

--Friendly, relaxed atmosphere and getting to know other educators of the Borough.

--Enthusiasm of the intructors.

--The processes used in guiding us to realize what the philosophies of the district are and how they relate to universal concepts and vice versa. It is very important to have (or take) time to evaluate how you feel about education and how it relates to how others feel.

--I know have a feeling that educators are really (at last) pulling together to accomplish the goal of a meaningful education for students.

--Small group sessions and interchange of information, preparation of the unit matrix.

--Ways to construct a unit.

--Personal needs, life styles, applicability.

--Time lost in early meetings.

--We all really got involved and did little straining.

--Us.

--Much of the material concurred with my philosophy. I never had the expertise to develop the information. I suppose it will really be beneficial as a motivator for general math classes.

--Non-threatening manner of teaching, teachers sensitivity to the group, actual practice of use of matrix in small groups, ideas from group were generated very effectively.

--I have reservations probably because I don't know what the final product will look like and what problems will be associated with development of.

--The grouping of teachers together and discussing their ideas and current class instruction.

--The objectives of the course and the purpose of the first exercises (relating philosophy, concept, and subject matter) should have been made clearer. It took 3 sessions before I realized that that was what we were trying to do. I'm still not sure that that was your objective!

--The more I got into this and discussed it back home the more I felt the application won't be effective.

--I was bored, but this was a lot my own attitude. I just didn't put enough into the class to get much out.

8. Would you recommend this course to others? If so, to whom, and why?

--I would recommend it to persons who have grown stagnate in their planning and to those who need outside encouragement toward satisfying the needs of each student.

--Yes, only in an attempt to create a general awareness of the concept of career education in a small group of educators from a given District. Then this group would pass on concepts, theories, etc. to balance of district teachers.

--Yes.

--Only after it's speeded up or more concrete projects are assigned.

--All teachers should have it after 5 years of teaching.

--If someone is really in need of a curriculum development course - yes - If no need - I would say no!!!

--Yes. Teachers in my school. To help them document their instructional plan.

--Yes. Any teacher. It made me think and I saw others in each group I was in doing the same. The more I learn the better I can teach - I think!

--Would recommend all teachers and administrators put together concepts for courses.

--Yes - any teacher.

--Some. Those who want to learn or refresh their ideas about unit planning.

--Yes, all teachers.

--Yes, fellow Home Ec teachers to give us a basic foundation for building Home Ec curriculum together.

--Yes, would step up specific directions and institute unit development sooner.

--Not particularly - might be good for beginner but it seemed to duplicate much of what I've been through before. The discussions were the most interesting to me.

--No!

--Yes - anyone - because I like myself better.

--Yes - to people who are enthusiastic about the course. I think that noninterested people should not waste yours, mine or the school district's time on a program like this.

--Yes, my fellow teachers.

--No.

--With reservation - How has this helped me to write and print plans for a curriculum?

--No

--Yes. All secondary teachers - especially those in vocational or special education where the latitude of possible teaching areas is so broad.

--To some teacher friends I've known over the years! I'd recommend though, that the course be in concentrated time segments rather than over so long a span. I think we, as participants, would have been more attentive and responsive.

--Yes. Same kind of group as we have here.

--Yes. Only if more organized materials were gathered so that one could learn or "grow" more. Show or expose us to programs in other states, in order that we might know what is happening.

--Yes, college students with students in student teaching.

--Other English teachers at K.C.H.S. as well as other areas of Borough.

--Perhaps depending on the person. If they needed a little insight into how the philosophies of a school district affect the children.

--Yes. Every teacher in the Borough.

--I feel there is value for all instructors at all levels.

--Yes. I think it would have been of great value to elementary teachers as well.

--Yes. To all educators (teachers) (nurses).

--Yes.

--Yes, all administrators in each school building.

--Yes.

--Yes. With some changes to other staff members of K.P.B.S.D.

--Yes. All the teacher personnel of the district. There would be better cooperation, understanding and effort.

--Yes. Fellow teachers.

--Would recommend it to teachers that have taught a couple of years. There's a difference between student needs (humanistic needs, needs for the student, immediate needs and etc.). It makes a teacher more aware of student needs.

--Yes. To teachers, board members and interested parents who can handle classes not strictly structured and who want to contribute to the direction of our curriculum.

--Enjoyed it since the philosophy does not contradict my own.

--Thoroughly enjoyed and appreciated our instructors, their professional group-processing, and ideas generated and shared.

--I feel like I've wasted a good deal of valuable time. We still don't have anything usable for the District. This is a rip-off of my time and taxpayers money. I didn't miss a session - who noticed or cared?

--I do think much time has been wasted - I still feel inadequate to write a curriculum.

--The use of instruction was fine but too much. It never came together.

--Thanks for your help!

--Bi-monthly meetings instead of monthly meetings might make the retention of materials easier not necessarily lesser!!! The presenters were fine!!! Academically and personable in their interpretations, and classes.

--None.

--Clap should publish his book on Polock jokes. He'd make a million. Has he ever thought it may be a desirable basic resource for human relations.

--This evaluation seems too negative, which isn't intended that way. Basically. I feel that after quite a number of years of teaching and considerable works with curriculum, I have developed a modest curriculum which seems to consider the things the course feels should be considered and accomplishes the goals the course felt worthwhile. I have streamlined my approach and feel that it works better - for me. The course, thus, reinforces me in my opinion - I haven't been too far afield. At the same time I feel that someone else may have gained more than I did.

--Thank you.

--Good show! Come back. I have learned things.

--I do not know how you could make curriculum development more enthusisatic, but it seems that the course dragged quite a bit. I like more action in hands-on type activities so the enthusiasm factor is greater.

--Missing some sessions because of prior plans caused some problems. That's my problem.

--Thank you.

--Hope this continues to function as a necessary part of the 77-78 curriculum.

--Nothing.

--We should have been doing at the second meeting what we are doing now - preparing the units.

--Many ideas were covered in the course, to list specifics would be difficult.

Final Evaluation Session Interviews

Six program participants were personally interviewed by Dr. Lyle Berg during the course of the final evaluation session to gain a more personified consensus of the overall training program. Nine questions were posed to the six people and a summary of their responses are as follows:

1. *As a result of this course of study, do you have a better concept of career education?*

All six felt their time had been spent either introducing them to career education or reinforcing previous conceptions of the subject. One felt that it was an expensive process in terms of time - felt that he should have spent some time doing curriculum writing, especially since some people signed up for the course to work on curriculum.

2. *As a result of this course of study, do you have a better concept of curriculum design?*

All six were more or less affirmative in their response to this question. Some felt they had definitely attained clarification, while one felt he had attained an understanding of curriculum design but was unsure if it was any better than his previous techniques.

3. *Do you see how your concept of career education and your understanding of curriculum design could blend together?*

Of the five responding (one abstaining), all were affirmative once again. But specific comments alluded to the great amount of data to have taken in during such a short period of time.

4. *How valuable has this course been to you? (Rating based on a 1-5 scale with 1 being low and 5 being high.)*

The mean was 3.2 as far as the rating went, with 4.5 as high (one participant felt the course was excellent and was an inexpensive way to improve one's certification) and 1 as low (this participant felt that the course was a waste with only 1 or 2 sessions being all that was needed; resented time being wasted).

5. *What particular part of the in-service did you find the most helpful?*

This topic solicited a variety of individual responses. Some felt the first few sessions, orienting them to the training program, were the most appropriate, while others emphasized specific exercises during the program as being most beneficial to their growing familiarity with career education. One placed particular emphasis upon the program's orientation to increasing teachers' awareness to student needs and sensitivity to youngsters. Another made mention to the instructors' adherence to a policy of "practice what you preach."

6. *Have you taken a look at your own program? Made any changes, etc.?*

The responses from this question solicited a difference in opinion from the interviewees. Some felt that due to their examination of their own programs, some changes were needed, and the program had helped them to initiate or formulate some changes. Others said they had previously made changes which were supported by the in-service program (a basis for encouragement). One said that more time was not being focused at outside activities to help make what is being learned more important.

7. *Any changes in the schools as a result of the in-service?*

Overall, most of those interviewed were inclined to believe that it was too early to expect any changes. They were more inclined to believe that the changes must occur internally prior to visualizing external modifications. One added that one change centered on providing an opportunity for certain faculty members to meet and talk together who otherwise had no grounds to do so. Another said there was less "putting down" of students by teachers in the faculty lounge.

8. *Do you have a better understanding of why curriculum has to be organized and coordinated?*

Four of the six participants were affirmative in their response to this question. However, the remaining two, and two of those affirming felt qualifiers were needed to their response: one maintained the need for curricular flexibility in order to meet the needs of each child; another stressed the fear of chaos, again reinforcing the flexibility requirement. Last, but not least, one felt that his understanding had not been increased, and further stated that nothing was accomplished, in his opinion.

9. *Is in-service a good way to approach curriculum and curricular change?*

All the participants were inclined to believe that in-service is a good way to approach curriculum and curricular change, but with some exceptions: several felt that six sessions were too long a period to treat a subject matter via an in-service program; they felt more assignments and more structure could have eliminated a few of the sessions, thereby giving them the same data in less time. A few were more inclined to believe that a "grass roots" philosophy should underlie such programs: teachers teaching teachers; relating to the uniqueness of the local situation as opposed to bringing in outside experts to talk about national trends which may or may not explicitly relate to the school's situation. Overall, the consensus obtained was favorable to the program and the results carried home by the participants.

Practicum Examination Results/Overall Program Consensus

In addition to the previously addressed evaluations conducted by Dr. Berg, a practicum examination was administered to the in-service participants by David Clapsaddle and Quentin Schwartz to assess the career education concepts hopefully acquired by the in-service program participants as well as the overall success of the in-service program on career education. Each of the practicum's sections were scored and determined via a mean score for the 35 participants. The practicum examination contained sixteen steps, each of which displayed a developing understanding of career education.

Each of the sixteen steps was rated in the following manner:

0 - did not complete or was way off base

1 - poor

2 - good

3 - understanding of the concept

The sixteen steps or questions constituting the practicum were as follows:

1. Design your student population
2. Identify basic resource
3. Create title to narrow the scope of the concept

4 - 8. Write appropriate topics

9. Write our objective for first row
10. Write the demonstrative activity for first row
11. Write one supportive activity (active) for first row
12. Write one supportive activity (passive) for first row
13. Indicate one resource (human) to assist in the supportive activity (active)
14. Indicate one resource (printed, filmed, real) to assist in the supportive activity (passive)

15. Indicate evaluation procedures

16. Which of the life roles does this row speak to? Identify the life role and explain.

The mean scores obtained for each of the sixteen questions provided a variety of understanding, and greatly assisted in discovering the depths of the total groups' understanding as well as its still apparent misconceptions (which could be identified as subjects or topics for future career education programs, talks, or presentations.) The mean scores for each of the sixteen questions were recorded as follows:

1.	2.57	5.	1.86	9.	2.23	13.	2.66
2.	2.91	6.	1.80	10.	2.34	14.	2.77
3.	2.23	7.	1.83	11.	2.77	15.	2.63
4.	1.94	8.	1.63	12.	2.71	16.	1.40

With little interpolation, one can easily see that the degree of understanding varies from a low of 1.40 for question sixteen to a high of 2.91 for question two. It is interesting to note that of the sixteen mean scores, ten were 2.23 and above, indicating a good to excellent understanding of the concept. The scores which were below 2.0 seem to be the probable indicators for future analysis; they included steps 4,5,6,7,8 and 16. Steps 4-8 required the participant to write appropriate topics for the overall objective. It seems that many of the topics did not adequately relate to the objective; many only created one topic and failed to designate the others. Step 16, with the lowest mean of 1.40, seems to indicate that most participants were unsure about this question; they either did not understand the question or could not identify which life role the activity addressed.

With the results of the practicum in mind, it seems only relevant that more attention should have been paid to the selection and designation of applicable topics to support the overall career education objective selected. As well, a better or more concise understanding of life roles is called for. With a total mean of 2.27 for the 16 questions, an overall evaluation score of very good is a consensus to be made. Obviously there are some topics which need to be readdressed or reemphasized, but the scores do indicate the in-service program achieved a substantial gain in terms of acquainting teachers with career education and providing them with a utilitarian formula for curriculum design in this matter.

APPENDIX C

A COMPARISON OF CAREER EDUCATION INFORMATION AND TECHNICAL ASSISTANCE SYSTEMS

A Report Prepared for the
National Advisory Council for Career Education

Order No. P00770624 (9/29/77)
Grant and Procurement Management Division
United States Office of Education

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July 20, 1978

DISCRIMINATION PROHIBITED

Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title IX of the Education Amendments of 1972, Public Law 92-318, states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance." Therefore, career education projects supported under Sections 402 and 406 of the Education Amendments of 1974, like every program or activity receiving financial assistance from the U.S. Department of Health, Education, and Welfare, must be operated in compliance with these laws.

The material in this publication was prepared pursuant to contract number P00770624 from the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

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List of Acronyms Used in this Report

AIM/ARM	Abstracts of Instructional Materials/Abstracts of Research Materials (Now RIVE, part of NCRVE.)
CVE	The Center for Vocational Education, Ohio State University (Now the National Center for Research in Vocational Education - NCRVE.)
ERIC	Educational Resources Information Center
ERIC/CE	ERIC Clearinghouse for Career Education (Includes Career Education, Vocational and Technical Education, and Adult and Continuing Education.)
EBCE	Experience Based Career Education
IRIS	Interagency Research Information Exchange
NCCE	National Center for Career Education
NCRVE	National Center for Research in Vocational Education
NDN	National Diffusion Network
NIE	National Institute of Education
NNCCVTE	National Network for Curriculum Coordination in Vocational and Technical Education
NTIS	National Technical Information Service
R&D	Research and Development
RDX	Research and Development Exchange
RIVE	Resources in Vocational Education (Formerly AIM/ARM.)
SSIE	Smithsonian Science Information Exchange
USOE	United States Office of Education

I. Introduction

Background and Purpose

According to the Scope of Work statement for this study, "considerable efforts have been launched to provide career education practitioners and researchers with up-to-date information and assistance about materials, training strategies, research projects, and other career education activities. The major national systems providing such help are the following: The ERIC Clearinghouse on Career Education (ERIC/CE); The Research and Development Exchange (RDX) of the National Institute of Education (as applied to career education); Abstracts of Instructional Materials/Abstracts of Research Materials (AIM/ARM); the National Center for Career Education (NCCE); the National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE); and the National Technical Information Service (NTIS) of the Department of Commerce. Since this study began, a contract has been awarded to the Center for Vocational Education to operate a National Center for Research in Vocational Education, and this new system will be absorbing AIM/ARM as well as serving as the base for the ERIC/CE Clearinghouse. The National Diffusion Network (NDN) has also been added to the study because it offers a number of career education programs for dissemination.

The Scope of Work statement continues: "Because of the large number of such assistance systems, questions have been raised by both practitioners and policy makers about the specific services offered by each, possible overlap of services, and/or possible ways to more effectively coordinate the services offered.

"The purpose of this paper will be to: (1) describe the specific services offered by each of the above-referenced systems, including (but not limited to): content of each system; services offered; clients served; procedures for use; cost for each service; service area (geographic); response formats; response time; and utility of responses for clients served [see Chapter II]; (2) compare and contrast the various systems in terms of the items in (1) above; and (3) make recommendations on issues to be resolved and steps to be taken to assure maximum coordination and minimum overlap among these various systems." [see Chapters III and IV]*

Types of Information and Services. The analysis and comparison of the information/service systems listed in the Scope of Work for this study were done from the point of view of the consumer, the career education practitioner or researcher who comes in search of information or assistance on problems involving: (1) the identification, selection or development, and implementation of instructional materials; (2) the clarification of the nature of career education and what it means for local or regional programs (including needs assessment); (3) the development of a career education curriculum and the provision of inservice education for teachers and other personnel; (4) the carrying on of research or evaluation in some aspect of career education or a closely related area; (5) the making of policy and the organization of administrative procedures; and (6) the carrying out of a program of dissemination and utilization of programs and products related to career education. The basic question of this study is: for those seeking these kinds of services, is there a problem? If so, what is the nature of the problem, and what might be done about it?

Conceptions of Career Education. Users of the systems under study will come to them with varying degrees of clarity concerning what they view as the nature of career education. These user views will probably converge on such matters as the importance of relating each individual's career development to his/her overall development and education, helping individuals build understanding of the various kinds of careers and occupations and how each fits into the economic system of our country, and aiding individuals in making appropriate career choices and obtaining necessary information and training. But user views of career education will probably diverge on such questions as whether it should apply to elementary and college/university programs; whether the term "career" includes nonpaid, volunteer, part-time work and leisure time activities, or only paid, full-time occupations; whether career education applies to professional as well as skilled (and other) occupations; and on just what the sequence of career development is (or should be).*

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*The Scope of Work statement also includes the following sentence: "Due to the limited nature of this award, the contractor will not be asked to evaluate the quality of services offered, although the use of existing data which may reflect on quality is certainly allowable."

For the purpose of this paper, it is not necessary to select one particular view of career education, since the users of the systems under study hold varying views and since, among them, these systems should provide services that are appropriate to the full range of views. However, it is possible to list a number of career education elements which can be combined in various ways to yield alternative definitions of career education and which are the main topics or subdivisions of career education in its broadest dimensions. These main elements are:

A. Main Topic Areas

1. Self-Awareness, including aptitudes, skills and competencies, interests, attitudes and values.
2. Career Awareness, including knowledge of individual occupations and clusters, world of work as related to lifestyles.
3. Economic Awareness, including knowledge of the United States economy and the relationship of various occupations/clusters to it, employment and job trends.
4. Educational Awareness, including requirements for various occupations, educational opportunities and requirements, time, costs.

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*See An Examination of the Definitions and Concepts of Career Education, National Advisory Council for Career Education, June 1977.[2]

5. Other Related Competencies, including basic communication, academic, decision-making, interpersonal, and employability skills.
6. Career Preparation and Training for specific occupations, jobs, roles, and/or pasttimes, including vocational, technical, and professional education.

B. Career Defined As

1. "Totality of work one does in his or her lifetime," including unpaid, volunteer, student, and/or leisure time roles.
2. Occupations or paid employment, economic role.

C. Education Defined As

1. "Totality of experience through which one learns," including formal and informal, school- and other agency-related, by self, peers, parents, teachers, counselors, employers, and others.
2. Formal course work or training sessions.
3. Career-related topics infused in other subject areas and activities.
4. Career guidance courses and activities.

D. Levels

1. Pre-school and elementary (pre-Kindergarten through grade 6)
2. Junior high or middle school (grades 6 or 7 through 9)
3. Senior high school (grades 9 through 12)
4. Postsecondary, junior community college, trade school.
5. College, university, professional school.
6. Adult and continuing education.

Which combination of these elements makes up the definition of career education held by a particular practitioner or researcher depends on a number of factors, some of which are suggested below (see Users, Chapter III). However, since user (and information/service system) definitions do vary, it is important that all users be as clear as possible on (a) what they mean by career education, and (b) what views are explicit or implicit in the policies and practices of the systems to which they may go for help.

Procedures

Initial contacts with the directors of seven of the original eight systems were made in November 1977 by letter. (At the time of these initial contacts the contract for the National Center for Research in Vocational Education had not yet been awarded, but a copy of the Request for Proposal for that Center was obtained.) The letter requested documents containing the information outlined in Figure 1. The documents obtained are listed in Appendix I. A follow-up telephone call was made to each system so that questions about the project could be discussed and so that a time for a site visit might be arranged. In two cases (ERIC/CE and NNCCVTE) the main contact person was the system director; in the other six cases the main contact was a person designated by the director. Contact persons are identified in Appendix II.

Some of the documents requested arrived before the site visits and so could be studied in preparation for these visits; other documents were studied at the time of the visits and subsequently. During January 1978, visits were made to NCCE in Missoula, Montana; ERIC/CE, AIM/ARM; NCRVE (which had by then been awarded), and the Resource Referral Service (RRS) of RDX at the Center for Vocational Education in Columbus, Ohio; and to the Washington, D.C., offices of NNCCVTE, RDX, NDN, and NTIS. A later visit was made to the NDN and RDX service units at the Far West Regional Educational Laboratory in San Francisco, and additional information was obtained by telephone and mail from the NNCCVTE State Liaison Representative and the NDN State Facilitator offices in Sacramento, California.

Analyses were made of the information gathered on each information/service system and this information was organized for presentation using an adapted form of the EPIE framework of instructional design. Under this framework, six dimensions of each system were described using a common language: subject or scope areas covered, intended users, intents and purposes (including rationale), contents (information and assistance offered, with special emphasis on career education), methodology (including means of user access, ways of collecting and delivering information and services), and provisions for evaluation (see Chapter II). A full draft of each of the descriptions was sent to the main contact

Figure 1

A Comparative Study
of
Career Education Information and Technical Assistance Systems*

Descriptive Information

A. Clients Served

1. What kinds of Career Education Practitioners do you serve? Examples: Teachers, Teacher Aides, Administrators, Counselors, Curriculum and Materials Developers, and others at the elementary, secondary and higher education levels, including on-the-job training and employer-based programs.

2. What Geographic Areas do you service? National scope, regional (which?).

B. Aims and Purposes

What are the main purposes for you system?
Collection and dissemination of information, provision of technical assistance, carrying out of research, or other.

C. Content of the System

What does your system offer to its clients?
Information on programs/curricula, instructional materials, teaching or training strategies, career information, results of research, etc.

Technical Assistance on curriculum development, counseling, materials development and selection, training, research, etc.

Research projects on career education programs, materials, teaching or training approaches, counseling, career trends, etc.

D. Procedures Employed

How do you make your information or technical assistance available?
How are contacts made with your clients, who takes the initiative, how?
What response formats do you use? - publications, searches, linking agents, consultants, workshops, newsletters, etc.
Do you follow-up with clients to see how useful your responses are for them, or what kinds of services they would like to have you provide.

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*Systems include NCCE in Montana, ERIC Clearinghouse and AIM/ARM in Ohio, and NTIS (Dept. of Commerce), Nat'l. Network for Curriculum Coordination in Vocational and Techn'l. Education, Research & Development Exchange (NIE), NDN (OE), and the National Center for Research in Vocational Education.

person in each system to be checked for completeness and accuracy. After copies of these drafts were returned with corrections, the final versions of the system descriptions were prepared. These descriptions served as the basis for the comparisons and recommendations which are made in the final chapters of this report.

II. Descriptions of Seven Systems

As indicated above, the descriptions contained in this chapter were synthesized from information supplied by staff members of the various systems and the descriptions are presented in an outline based on the EPIE framework of instructional design.[43*]

Those readers desiring a brief overview of the systems are referred to Figure 2 at the beginning of Chapter III (page 49). The system descriptions contained in this chapter are located as follows:

System	Sponsor	Pages
National Center for Career Education (NCCE)	Office of Career Education, U. S. Office of Education	9 - 15
ERIC Clearinghouse on Career Education (ERIC/CE)	National Insitute of Education	16 - 22
Research and Development Exchange (RDX)	National Institute of Education	22 - 29
National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE)	Bureau of Occupational and Adult Education, U. S. Office of Education	29 - 33
National Center for Research in Vocational Education (NCRVE) [Now includes Abstracts of Instructional and Research Materials AIM/ARM]	Bureau of Occupational and Adult Education, U. S. Office of Education	33 - 38
National Diffusion Network (NDN)	Division of Educational Replication, U. S. Office of Education	38 - 44
National Technical Information Service (NTIS)	U. S. Department of Commerce	44 - 47

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* Numbers refer to references in Appendix I.

NATIONAL CENTER FOR CAREER EDUCATION, Office of Career Education, U. S. Office of Education

NCCE Affiliate Center, University of Montana
612 Eddy Street, Missoula, Montana (406) 243 5262/6466.

Subject Areas: Career Education topics infused in main content areas of the school curriculum, early childhood through adult/continuing education. Curriculum and teaching guides, course descriptions, instructional materials for student use, inservice training in career education.

Intended Users: Career Education practitioners working with students from preschool through grade 17+ and decision/policy makers; educators and lay persons from state, intermediate and local education agencies, colleges and universities, adult education and vocational education institutions; business, labor, industry, and the professions; those involved with special populations (handicapped, residents of correctional institutions, etc.)

Intents/Purposes

The National Center for Career Education (NCCE) was designed to perform a service of professional assistance by linking individual/institutional needs to existing career education programs, to deliver career education assistance to practitioners by facilitating the flow of usable career education materials and resources across the nation, and to lend aid to career educators in utilizing these resources within their own particular circumstances -- thus enabling innovative programs to reach the students of the nation.

NCCE is organized to combine intensive programs of local staff training with access to a bank of curriculum materials in career education. NCCE aims to help training program participants develop and implement sequential curricula with a career education emphasis -- especially through the infusion of career education topics in regular school subject areas. Although the training for each institutional participant is based on common elements, each learning package is individually designed to specifically meet the institutional situation and needs. That is, the training is "localized" in terms of the institution's philosophy of education, student needs, and approach to career education (as clarified, often, in the training).

NCCE stresses the pooling and sharing-in-kind of instructional materials through a single national center, especially by encouraging training program participants and those who request materials searches to submit materials that they have developed in return for those they receive from the NCCE materials bank.

Contents

Bank of Instructional Materials. The NCCE database consists of a bank of over 7000 career education instructional materials for use in relating career education topics and concepts to instruction in various school subject areas. The contents of the bank include mainly non-commercial (and mostly teacher-made) learner materials, curriculum guides and manuals, and materials for use in assessing student progress or understanding. Other materials describe programs and activities (including project reports) and curriculum development and implementation strategies. NCCE does not actively computer bank such documents as research reports, journal literature, doctoral dissertations, lists of objectives or test items, vocational or occupational information (e.g., job trends, availability), or conference reports, although such items are often acquired and kept by the Center for reference.

The content of the databank is categorized under three main career education headings: (1) self-knowledge - attitudes and appreciations, decision-making skills, avocations, family relationships, and health; (2) community awareness - economic relationships; citizenship rights, duties and responsibilities; resources; and nations; and (3) world of work - career choice, employability skills, and vocational specialization, plus 15 U. S. Office of Education Career Clusters: business and office, marketing and distribution, communication and media, construction, manufacturing, transportation, agribusiness and natural resources, marine science, environmental control, public service, health, hospitality and recreation, personal services, fine arts and humanities, and other.

The extent of coverage of these topics is divided, regardless of age/grade level, between: awareness (initial exposure, overview), exploration (middle-depth: simulation, trial runs, beginning skills practice), and preparation (in-depth coverage).

The materials computer banked by NCCE are available in a number of different formats:

(1) Initial Computer Search Listings - descriptions of materials (including title, author/publisher, components, subject area/s, content, methods, learning level, and evaluation — where applicable). Titles proposed for 1978 include mathematics, social studies, science, and language arts, K-12; guidance, occupational education, safety education, and consumer education, K-12; special education, health and physical education, and fine arts, K-12; plus other topics such as special days, telephone use, and in/preservice, test and evaluation, and administration materials. [$36 for all 40 listings, or $1 each]

(2) Custom Computer Searches yield tailor-made lists of materials descriptions for particular user interests and needs. [$35 per search]

(3) Preview Copies of non-copyrighted materials. [1¢ per page for postage and handling, if client makes own copies; 10¢ per page if client keeps NCCE copies] Preview Copies of copyrighted materials are available for loan only.

(4) Sampler Libraries of Materials - sets of teacher-prepared materials from the NCCE collection which have been judged to be the best examples of ways to infuse career education into the regular classroom. Sampler Libraries are available for grades K-3, 4-6, 7-9, and 10-12 — 50 materials in each grade level range covering 4-5 broad subject areas. [$90 per grade level range]

(5) NCCE Showcase Listing of exemplary materials is published regularly in the bimonthly newsletter, NCCE News.

Technical Assistance and Services. The NCCE inservice training modules cover four main processes: (1) the clarification of career education and the development of a working definition for the participating institution or community; (2) the localization of career education in terms of the institution's overall philosophy of education and student/classroom/career education needs, and the formulation of career education goals; (3) the planning and development of a sequential curriculum using the career education goals as guides; and (4) the implementation of a program, including the identification, selection and production, and adaptation of resource materials, and the use of materials in the classroom to carry out units of instruction.

A variety of special services are also available through the Affiliate Center,* including technical assistance in the design, administration, and analysis of local needs assessments; orientation to career education and to available NCCE (and other) services and materials; program evaluation; and referrals (where appropropriate) to other career education resources such as ERIC/CE, NNCCVTE, NDN, and RDX, as well as the Experience Based Career Education models.

Methodology

User Access. Except where local people have agreed to act as contact persons, user access to the NCCE database and services is made directly through the Affiliate Center* in Missoula. The preferred route for obtaining instructional materials is through a training course, or at least through consultation with NCCE staff, such that the selection process takes place in the context of local curriculum development in career education. Materials are also available through individual computer searches which are carred out by Center staff, as well as through the Initial Search Listings, Sampler Libraries, and through a number of institutions participating in the Library Exchange program of the Center.

Instructional materials in the NCCE database are identified through computer search using descriptors that are indicative of client needs. The searches are carried out by NCCE staff and are not available elsewhere. A user's "Search

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*The Affiliate Center in Missoula is, in effect, NCCE. The original plan for NCCE included several university-based centers around the country to provide services, but these were not funded.

Request Form" asks for a statement of the search problem/needs, a programmatic content description of subject areas involved (unit titles, topics, etc.), a description of the target population (grade level range, plus other relevant characteristics), career education concepts to be covered (awareness, exploration; self, community, world of work/career clusters), and other (media resources, constraints on media formats, dates, etc.). Descriptive printouts are supplied on computer paper. Once these descriptions have been reviewed by a user, copies of materials which fit the local situation can be borrowed for preview period of up to thirty days for the cost of postage. During the preview period, non-copyrighted materials may be reproduced by the previewer. Once previewed, materials can be kept for the cost of reproduction and handling (approximately 10c per page). For obtaining commercial and other copyrighted materials, the users are referred to the producer/distributor.

NCCE solicits contributions of instructional materials for its database in a number of ways -- from training course participants and consultation clients, as in-kind trades from those requesting materials directly and from Library Exchange participants, through the newsletter, NCCE News, by direct request from publisher or source, and through staff appearances at conferences and workshops.

Technical Assistance Activities. For the basic training program, arrangements are made by the Center staff with each user group (school district, state agency, or other institution) to present components which have been selected and tailored to user needs. The training sessions are usually held at the user site and may vary in length from a day's orientation session to a full sixty hour course, complete with academic credit, if desired, plus follow-up work to facilitate implementation. Over the past couple of years, at least five variations on the basic training program have evolved as the basic models upon which NCCE plans training with different kinds of client groups:

(1) K-12 Training Model offers inservice training for elementary and secondary school staff members in the infusion of career education concepts into various subjects of the standard school program. Emphasis is put on clarification of career education, curriculum development consistent with the overall school program, selection/development/adaptation of instructional materials, and implementation in the classroom.

(2) Higher Education Model offers help in infusing career education concepts, career planning and counseling, and the development of work-entry skills into the programs of liberal arts institutions.

(3) Institutional Model has NCCE trainers working with state agencies and other organizations involved in the implementation of career education in the schools and entails training staff both to work in career education programs and to train others to develop such programs.

(4) Business/Industry/Labor Educator Model teams up personnel from the world of work with educators who help develop classroom usable instructional materials about their occupational areas, gain skills needed to become effective community resources for school career education programs (and to train colleagues to do likewise), and become oriented to classrooms and school systems.

(5) CETA (Comprehensive Employment and Training Act) Model involves NCCE staff working directly with students on career exploration during the summer.

Other activities include providing orientation/overviews on career education to various kinds of groups, including workshops and conferences of professional organizations; designing, instrumenting, carrying out, and helping communities analyze and interpret the results of career education needs assessments; and consulting with various agencies and institutions on the evaluation of career education efforts, as well as referring those who inquire at the Center to other resources, where appropriate.

NCCE publishes a bimonthly newsletter, NCCE News, to keep users in touch with various developments at the Center and in the field, to announce the acquisition of exemplary materials, and to solicit contributions of materials to the database. The NCCE staff also works regulary with a number of governmental, local district, university, and professional groups to facilitate the exchange of information about career education programs and resources. Staff members engage, in addition, in a number of outreach and promotional activities in order to inform potential users of the Center's resources. These activities include giving speeches, conducting workshops, and making other informal and formal presentations to individuals, agencies and professional groups.

Evaluation

At the time of this writing, no formal or systematic evaluation of NCCE has been made. However, some changes in procedures which took place during the first year of operation (1976-77) are reported in the NCCE Final Report[9] for that year and also in a descriptive report carried out by the Bureau of Educational Research and Field Services of Montana State University at Bozman, which is included as an appendix to that Final Report. The two main changes mentioned are interrelated, in part. One was the classification system (mainly the descriptors used) for computer storage of materials descriptions and their retrieval; the other was in the location and makeup of the training course, which was moved from the Missoula campus to local sites and broken into individual modules which permitted better tailoring to local needs. Other changes involved adjustments in the system for fielding requests for materials, and particularly the practice of responding to user requests outside of the context of the training program, an activity which was not part of the original plan for the Center. Most of these changes are said to have been made in response to feedback from clients.

ERIC CLEARINGHOUSE ON CAREER EDUCATION, Dissemination and Resources Group, National Institute of Education

ERIC/CE Clearinghouse, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, Ohio (614) 486 3655

ERIC Document Reproduction Service (EDRS), P. O. Box 190, Arlington, Virginia 22210

ERIC Microfiche Collections (Directory available from ERIC Processing and Reference Facility, 4833 Rugby Avenue, Bethesda, Maryland 20014

Subject Areas: Adult and Continuing Education, Career Education, and Vocational and Technical Education. Research and evaluation reports, theoretical and position papers, curriculum guides, resumes of journal articles, instructional materials (except nonprint), speeches, and program descriptions.

Intended Users: Teachers, students, school adminstrators, research and development specialists, professional organization and government agency staffs, college and university personnel, educational decision and policy makers, business and industry personnel, labor organization personnel, community representatives, parents, book publishers, and other "motivated educators willing to use some simple research tools."[13]

Intents/Purposes

ERIC was established in 1966 "for the purpose of providing the educational community with ready access to results of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs."[17] ERIC was designed to provide a solid basis for the acceptance and use of worthwhile developments through a network of clearinghouses based in host organizations which are well-established and have good contacts with practitioners and researchers in their respective fields. Each clearinghouse has the responsibility for acquiring and selecting the documents in its scope area, as well as for cataloguing, indexing, and abstracting them for addition to a centralized database, so that all who use ERIC have access to data and products covering the full range of education.

ERIC/CE is responsible for documents in the areas of career education, adult and continuing education, and vocational and technical education. Specifically, ERIC/CE has as its purpose:

(1) The building of a database in these areas of documents which would not be available through standard sources and making them accessible to a wide range of practitioners.

(2) Carrying out an Information Analysis program in order to "transform this knowledge base from what is often an unknown, unmanageable, and unharnessed (as well as unaccessible) body of knowledge into an authoritative, substantive, and concrete body of facts on which to base educational programming."[15]

(3) Facilitating communication between practitioners, researchers, and policy makers in the three areas mentioned above as well as across the areas of education represented by the other clearinghouses.

Contents

The scope of interest of ERIC/CE includes all documents dealing with:

(1) Career Education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, specific vocational and occupational skills, and local, state, national and international policy.

(2) Adult and Continuing Education, formal and informal, including basic and literacy education, correspondence study, and all areas of inservice training relating to occupational, family, leisure, citizen, organizational and retirement roles.

(3) Vocational and Technical Education, including subprofessional fields, occupational psychology, occupational sociology, manpower economics, employment, industrial arts, and vocational rehabilitation (i.e., for the handicapped, mentally retarded, prisioners, discharged military, etc.).[17]

The ERIC Thesaurus[19] gives the scope of career education as "a comprehensive educational program that focuses on individual career development, beginning with grade 1 or earlier and continuing through the adult years." (page 26) Related terms included are: aerospace education, career awareness, career choice, career exploration, career planning, careers, occupational guidance, occupations, technical education, vocational development, and vocational education. Vocational education is defined as "formal preparation for an occupation below the baccalaureate degree" (page 227), and the related terms given include: career education, commercial art, continuation [sic] education, industrial arts, job training, manpower development, skilled workers, and vocational counseling. Technical education is defined as "a type of preparation for occupations between the skilled trades and the professions." (page 215) Related terms include: career education, post secondary education, school shops, technical institutes, science education, prevocational education, and terminal students, plus the names of some nineteen specific occupations. Adult education includes the term "continuing education" in the Thesaurus and its related terms are: continuing education centers, continuing education units, correctional education, educational gerontology, high school equivalency programs, postsecondary education, professional continuing education, professional education special degree programs, and women's education. (page 5)

ERIC specializes in "fugitive" documents, especially noncopyrighted, unpublished educational materials such as project reports, speech texts, research findings, locally-produced instructional and curriculum materials,* and conference proceedings ich would be difficult to find through standard reference sources. Documents which are accepted for the ERIC system are assigned descriptors from the ERIC Thesaurus, abstracted by local clearinghouse staff, and then forwarded to the ERIC Processing and Reference Facility for inclusion in Resources in Education (RIE)[13] and to be photographed for the ERIC microfiche collection.

Each clearinghouse is also responsible for producing resumes of, and assigning descriptors to articles relevant to the subject areas for which it is responsible that have been selected from a number of professional journals. These resumes are published regularly in the Current Index to Journals in

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*Although ERIC does index some copyrighted print documents, it does not handle nonprint materials (films, filmstrips, etc.).

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Education (CIJE). ERIC/CE regularly screens a number of journals, among which are the following in career education: Career Education Digest, Career Education Quarterly, Journal of Career Education, and the Illinois Journal of Career Education.

User Services of the ERIC clearinghouses include Information Analysis publications, bibliographies, newsletters, and brochures of various types, in addition to the carrying out of searches of the ERIC database and making referrals to other resources in response to telephone and mail inquiries. Clearinghouse staff members also participate in a number of conferences and workshops each year to help people build skills in information retrieval and dissemination.

Information Analysis (IA) publications on selected issues and topics for each subject field are produced by clearinghouse staff and consultants throughout the United States. The list of IA publications for 1976-77 in ERIC/CE includes the following of direct relevance to career education, in addition to 13 titles dealing with adult/continuing, vocational/technical education, and cooperative education:

Research in Career Education: the State of the Art
Sex Fairness in Career Education
Career Education: the Role of School Related Youth Groups and
  Voluntary Organizations
Programs of Career Guidance, Counseling, Placement
Information Resources for Education: a Review

The 1977-78 series of IA publications includes the following:

The Career and Vocational Development of Handicapped Persons
The Career and Vocational Development of Bilingual Students
Affective Work Competencies
Counseling and Guidance of Students Entering Nontraditional Courses
  and Occupations
Women and the Skilled Trades
Women and their Preparation for Professional and Managerial Careers.

User service products of ERIC/CE also include a brochure, newsletter, and various bibliographies pertaining to topics which are the subject of frequent user queries. The ERIC/CE "Clipboard" series of leaflets includes the following career education-related titles:

Career Education Journals and Newsletters (list of 12)
Education Resource Centers ("How-to" listing of resources)
Career Education: Middle/Junior High School (units of instruction list)
Career Education for the Handicapped (list of program descriptions)
Career Education Measurement/Evaluation (list of guides and monographs)

Other titles in this series include: What is ERIC? Searching ERIC, Submitting Documents to ERIC/CE, Preparing Documents for Submission to ERIC/CE, and ERIC Organizational Structure.

Methodology

User Access. There are four main avenues of user access to the ERIC documents and resumes on specific subjects or topics:

(1) Inquiries directed to the ERIC/CE Clearinghouse at the National Center for Research in Vocational Education via mail, telephone, or personal visit. Responses to such inquiries are made in the form of one or more of the User Services or Information Analysis products (see Contents), by carrying out a computer search of the database or by referral to another information source. A "Type 1" computer search yields card format bibliographies with author, title, year, and ED/EJ number listed for each relevant document going back four years [@ $15 per search]
"Type 2" searches are tailored more specifically to user needs and involve interactive scanning of ERIC and other relevant databases, yielding paper printouts with author, title, date, and ED/EJ (or other) numbers --and can include descriptors and abstract for each document identified. [Cost varies by length of search and type of output]

(2) Direct manual searches of issues of Resources in Education (RIE), which is available in many libraries and other microfiche collection centers, with the help of the ERIC Thesaurus, or of the Current Index to Journals in Education (CIJE), will yield much the same information on documents as a "Type 1" computer search (above).

(3) Once relevant documents have been identified, they can be obtained on microfiche in any one of the more than 650 plus locations (libraries, information centers, etc.) around the country which have ERIC microfiche collections. Some of these sites have equipment for duplicating microfiche or producing a paper copy from a microfiche projection. Those wishing to order microfiche or hardcopies of documents by mail can apply to the ERIC Document Reproduction Service (EDRS) in Arlington, Virginia.

(4) There are a number of agencies which are staffed and equipped to help users obtain information and documents from ERIC. Among these are regional and state curriculum coordinating units, R&D laboratories

and centers, intermediate education agencies, and a number of commercial vendors.

In addition to those which are sent in unsolicited from the field, documents are acquired by ERIC/CE staff seeking them out through a process of regularly checking on new research projects; monitoring conferences, seminars and workshops; establishing and maintaining a "surveillance network" among recognized scholars in the relevant subject fields; and regularly reviewing issues of selected periodicals. The ERIC Processing and Reference Facility also has "standing agreements" on acquisitions with government agencies and other producers of documents. Documents acquired by the Facility are sent to the appropriate clearinghouses.

Each document that comes to the clearinghouse is first evaluated by a subject matter specialist to determine whether its content is relevant to the ERIC/CE scope of interest and whether it meets certain quality criteria. These criteria involve such matters as contribution to knowledge, significance and relevance, newness and innovativeness, effectiveness and thoroughness of presentation, and reproducibility. Those documents accepted for the main ERIC collection are assigned appropriate ERIC Thesaurus descriptors (for indexing and retrieval); a brief resume or abstract (of approximately 200 words) of each is written as part of its RIE entry. Journal articles are similarly assigned descriptors and annotated. The descriptive entries for each document and journal article, together with a copy of each document, are sent to the ERIC Processing and Reference Facility for inclusion in RIE, CIJE, and the ERIC computer bank and microfiche collection.

Evaluation

A number of external evaluations of the ERIC system have been carried out. Among these is the Report and Guidelines on Improving the Retrieval of Product

Information from ERIC.[19]

Internally, ERIC/CE evaluates the quality of its service to users in three main ways. Informal feedback is regularly obtained via user letters, which are filed and stored; postcard feedback forms are sent to all users for whom the clearinghouse provides computer searches (asking how search services were learned about, how satisfactory they were, whether response time and cost were reasonable, how search might be improved, and whether would use service again); and formal input is obtained from the ERIC/CE Advisory Committee.

Additionally, the entire ERIC system has a regular system for reviewing and revising or adding to the thesaurus descriptors. Some changes result from new developments or interests in the various fields; others arise from difficulties encountered in indexing and searching. The entire system is under a process of continuous review so that services to users can be expanded and built upon an enduring database.

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RESEARCH AND DEVELOPMENT EXCHANGE, Dissemination and Resources Group, National Institute of Education.

Regional Exchanges (serving 42 states, as indicated:
Appalachian Educational Laboratory, Inc., Charleston, West Virginia. [Alabama, Florida, Kentucky, Mississippi, North Carolina, Missouri, Ohio, and Wisconsin]
CEMREL, Inc., Kansas City, Missouri. [Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Ohio, Wisconsin]
Mid Continental Regional Educational Laboratory, Kansas City, Missouri. [Kansas, Nebraska, South Dakota, North Dakota, Colorado, Wyoming]
Northwest Regional Educational Laboratory, Portland, Oregon. [Alaska, Idaho, Montana, Oregon, Washington]
Research for Better Schools, Philadelphia, Pennsylvania. [Delaware, Maryland, Pennsylvania, New Jersey]
Southwest Educational Development Laboratory, Austin, Texas. [Arkansas, Louisiana, New Mexico, Oklahoma, Texas]
SWRL Research and Development, Los Alamitos, California [California, Nevada, Utah, Arizona]

Subject Areas: Results of educational research and development (R&D), especially federally sponsored; concerns of educational practitioners relevant for R&D; all instructional areas, administration, instructional materials and programs, especially high priority areas of basic skills in language arts and mathematics and competency-based education.

Intended Users: Educational practitioners - teachers, principals, and specialists in school systems; intermediate service agencies, state education agencies. Researchers and developers and policy makers, including those in federal, state, local, and university-based educational organizations, laboratories and centers. Disseminators, information specialists, linking agents at the local, intermediate, state, regional, and federal levels. Funding agency personnel -local, state and federal.

Intents/ Purposes

The Research and Development Exchange (RDX) was established to create an exchange of information whereby researchers and developers communicate the results of their work to educational practitioners and, simultaneously, practitioners relay information about their needs to researchers, developers, and policy makers. Thus, RDX encourages practitioners to influence future research and development policies and programs while it informs them about available federally funded research and development (R&D) outcomes. RDX goals are to:

(1) Develop, with existing linking and dissemination organizations and personnel, ways of coordinating dissemination activities and resources through the sharing of information regarding alternative dissemination strategies and human and material resources.

(2) Increase the understanding and use of R&D outcomes by organizations and personnel who work with practitioners by (a) providing consumer-oriented information that facilitates comparison of R&D outcomes and matching them to specific needs, (b) providing assistance in the use of this information, and (c) making federally supported R&D outcomes more accessible.

(3) Increase shared understanding and application of information about practitioner needs and efforts, and to stimulate efforts to meet those needs by those involved in educational R&D, in order to improve educational practice through: (a) providing information about practitioner needs and current activities to help the R&D community make decisions regarding the production and delivery of R&D outcomes, (b) providing information about dissemination and

use of R&D outcomes, and (c) helping the R&D community explore the implications of information about practitioner needs and apply this information to their work.

Contents

Information and Products. The RDX effort is concerned with the following kinds of research and development (R&D) outcomes: (1) the findings of specific studies, (2) concepts and generalizations which structure and summarize current understanding, (3) educational practices which operationalize, or apply, current understandings in specific settings (including locally developed R&D-based practices), and (4) products which help others adopt, adapt, and implement spcific R&D-based practices. R&D outcomes are defined as "those products, skills, programs, instruments, teaching and management methods and techniques, and concepts that are produced by disciplined inquiry involving activities normally considered part of the R&D process such as conceptualizing, hypothesizing, developing models, field testing, data-gathering, analyzing and evaluating."[23] An R&D product is defined as "a tangible, transportable, self-contained outcome of the R&D process [which involves] a sequence of activities rooted in the scientific method in which research findings or relevant theory is translated into usable artifacts. The translation is then subject to evaluation and revision to ensure that the product meets the needs for which it was designed."[23]

Research materials include reports and presentations, books and monographs, journal articles and book chapters, workshops and briefings, theses and dissertations, audiovisual materials, colloquia and seminars, and ERIC (and other) citations. Practitioner products include instructional materials for students, administrator and teacher training materials, replicable program models, guidelines and handbooks, and resource guides and catalogs.

Examples of R&D products which have particular relevance for career education practitioners can be found in the Catalog of NIE Products[25] in a Volume I section titled "Education and Work (Career Education)" (pages 553-760):

(1) Education and Work: Adminstration and Staff Development.
- 17 products from the Center for Vocational Education, 12 of which are intended for use in staff development in career education or a closely related area;
- 7 products from the ERIC/CE Clearinghouse (DeKalb) dealing with USOE Career Clusters, the use of career education products, and topics in vocational and continuing education;
- 1 product of the ERIC Clearinghouse on Teacher Education from its Project on Career Education;
- 1 product of the Appalachian Regional Commission and the University of Kentucky on career education in the elementary school;
- 1 product of the EPIE Institute on the selection and evaluation of career education instructional materials.

(2) Career Awareness and Exploration
- 23 teacher guides from the Center for Vocational Education dealing with such topics as measurement and related careers, economic and career awareness, information on specific careers, and career exploration in the life and physical sciences;
- 1 high school text from Northwest Regional Laboratory (and Prentice-Hall) on computer careers;
- 1 product titled "Career Education Concept Lesson Cards" from the New Hampshire Union 58 Experimental Schools Program.
- 1 product from the Mountain Plains Education and Economic Program on basic communication and mathematics as part of occupational training.

(3) Career Counseling
- 12 products from the Education Development Corporation (EDC) Home/Community-Based Career Education Model III;
- 2 Appalachian Educational Laboratory products on career guidance (including student materials);
- 9 products from the Center for Vocational Education, some from their CPSS (Career Planning Support System), one on career information for career education programs, one on problem solving for students leaving high school, and five on self-understanding;
- 1 product from ERIC/CE (DeKalb) on the computer and guidance;
- 3 products from ERIC/CAPS (Counseling and Personnel Services) on career guidance;
- 2 products from the American Institutes for Research (AIR), their Career Data Book and Project TALENT Profiles;
- 1 product from the University of Wisconsin on Age-Income graphs for 336 careers;
- 1 product from Johns Hopkins University called "Self-Directed Career Program" (SDC), a vocational guidance system for students and counselors.

(4) Work-Experience-Based Programs
- 4 descriptions of the Experience-Based Career Education (EBCE) program models from four national laboratories: Research for Better Schools, Northwest Regional Educational Laboratory, Appalachian Educational Laboratory, and Far West Laboratory;
- 1 product from the University of Illinois on Management Internships;
- 3 products from the Mt. Plains Education and Economic Development Program for individualized approaches to instruction for family, building trades and services, and office education.*

Services. The Research and Development Exchange (RDX) is one part of a "nationwide dissemination configuration" which was recommended by the 1977 Dissemination Forum. Other elements of this configuration include ERIC, the National Diffusion Network (NDN) and the Joint Dissemination Review Panel (JDRP), and other efforts to identify and disseminate "effective" practices; resource centers with information specialists to help practitioners in some state education agencies, intermediate service agencies, universities, and larger school systems; and special projects (e.g., the NIE R&D Utilization projects) which have been designed to help practitioners deal with special problems (e.g., student performance in basic skills or career preparation) by considering and using R&D outcomes. The seven regional exchanges of RDX are set up to promote and facilitate a two-way exchange between practitioners and R&D specialists.

In addition, the four Central Support Services are available to the RDX regional exchanges, as well as to other interested dissemination groups:

Dissemination Support Service (Northwest Regional Laboratory) provides training, consultation on training, and other related support for individuals responsible for dissemination activities in states, service areas or local school districts.

R&D Interpretation Service (CEMREL, Inc.) is experimenting with transforming R&D-based knowledge into forms that can be used more readily by educational practitioners (including identification of existing interpretive literature) in order to provide information which will help educators make choices among an array of materials and practices.

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*The NIE Catalog, published in 1975, is rapidly becoming dated. Some of the products listed may be unavailable, and others are now available through commercial publishers.

Resource and Referral Service (National Center for Research in Vocational Education) is building a data bank of available information resources. Included in this bank will be data about organizations and people who produce, are knowledgeable about, or disseminate R&D outcomes — especially in the basic skills and competency-based education areas. (A number of "RRS Minilists" of resources have already been published.)

System Support Service (Far West Regional Educational Laboratory) facilitates the operation of the total R&D Exchange and coordinates the efforts to inform the R&D community of practitioner reactions and needs.

Methodology

User Access. RDX consists of four Central Services and seven Regional Exchanges working through 42 cooperating state education agencies. Activities are carried out primarily through linking agents affiliated with the state agencies (SEAs); that is, each cooperating SEA has one or more contact persons to whom local educators can go when in need of resources, either by telephone or mail. The linker, in turn, answers the user questions or refers them, as necessary to a Regional Exchange or Central Support Service.

The Regional Exchanges may engage in any of the following activities:

Identification of regional and extra-regional R&D information systems of potential usefulness to state and intermediate linkers;
Identification of linker training support needs in the region;
Design and conduct of model training programs to meet linkage training needs;
Assistance of users in the analysis or evaluation of existing dissemination programs and activities;
Assistance to users in conducting their own needs assessments and in making examinations of alternative models and strategies for decision-making;
Collection and preparation of selected R&D consumer information materials to meet high priority needs of regional workers;
Distribution of consumer education materials;
Establishment and maintenance of small-scale regional collections of R&D products in priority areas;
Collection of data on regional educational needs identified by SEAs from statewide assessments or information requests;
Synthesis of data on educational needs for reporting to System Support services, NIE, and other relevant groups.

Activities of the Resource Referral Service include:

Obtaining and compiling comprehensive information about resources, organizations, and personnel which will help the regional exchanges;
Providing services to the regional exchanges involving information about available resources and assistance in making contacts;
Identification of materials and information systems which provide information on alternative educational programs and products;
Development of model products which pull together information on R&D outcomes and product alternatives in priority areas.

The Research and Development Interpretation Service will be:

Identifying materials and information systems which provide information on alternative educational programs and products;
Developing model products which pull together information on R&D outcomes and product alternatives in priority areas.

Additional RDX activities include the synthesizing of regional data and recommending priorities for RDX, development of a tracking system for R&D projects and maintenance of a file of information on NIE and non-NIE R&D outcomes in priority areas, assisting users in the analysis or evaluation of existing dissemination programs and activities, and collecting information about the extent of use and usability of R&D products.

Evaluation

No systematic external evaluation of RDX was indentified in the course of this study.

Internally, there are two main areas of concern. One has to do with how best to disseminate R&D outcomes to educational practitioners and how best to "feedforward" information about practitioner needs and experiences to researchers, developers, and R&D funding agencies. Related to this area is R&D tracking, or the process of determining patterns and locations of R&D outcome utilization and its impact within the education community. A second area of concern has to do with ways of identifying "effective" practices which have been developed through R&D effort. In one RDX document, an exemplary practice is defined as "a new or outstanding practice developed in a local education setting. A practice is exemplary to the degree it meets five criteria: (1) is viewed by practitioners as worth initiating, (2) is successful/effective, (3) is exportable, (4) is reasonable in cost, time and personnel required for implementation, and (5) has been systematically documented."[23] For example, the Joint Dissemination Review Panel[35] reviews evidence of the effectiveness of educational practices developed with federal funds, and approval by the panel makes a product eligible for financial assistance aimed at widespread dissemination by NIE or USOE (as with the National Diffusion Network programs).

NATIONAL NETWORK FOR CURRICULUM COORDINATION IN VOCATIONAL AND TECHNICAL EDUCATION, Bureau of Occupational and Adult Education, U. S. Office of Education

Curriculum Coordination Centers (serving states and territories indicated):
Northeast, Trenton, New Jersey. [New Jersey, Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, Virgin Islands, and Puerto Rico]
Southeast, Mississippi, Mississippi. [Alabama Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee]
East Central, Springfield, Illinois. [Delaware, District of Columbia, Illinois, Indiana, Maryland, Michigan, Minnesota, Ohio, Pennsylvania, Virginia, West Virginia, Wisconsin]
Midwest, Stillwater, Oklahoma. [Arkansas, Iowa, Kansas, Louisiana, Missouri, Nebraska, New Mexico, Oklahoma, Texas]
Northwestern, Olympia, Washington. [Alaska, Colorado, Idaho, Montana, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming]
Western, Honolulu, Hawaii. [American Samoa, Arizona, California, Guam, Hawaii, Nevada, Trust Territories of the Pacific, Mariana Islands]

Subject Areas: Vocational and technical education, including career education. Primary focus on facilitating the sharing and coordination of materials and curriculum development efforts within states and territories and nationally.

Intended Users: Vocational educators in schools, junior colleges and community colleges, colleges, universities, and adult education centers; teachers and administrators of secondary, postsecondary, and adult vocational programs in need of instructional materials and program guides, and limited technical assistance.

Intents/Purposes

The National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE) was developed to facilitate instructional management decisions with which vocational and technical educators are typically confronted. These educators face alternatives for action; they need to share expertise, ideas, and materials, and to gain expanded insights into recent developments in their own states and around the nation; and they need instructional materials. To fill these needs locally requires a substantial amount of time and money. The Network has been set up to systematically inform instructors, administrators, and curriculum support personnel of vocational and technical education curriculum activities and to share with them the fruits of local, regional, and federal curriculum and materials development efforts from all around the country.

The objectives of the NNCCVTE are (1) to improve curriculum capabilities and services at the state level, (2) to minimize duplication of effort in curriculum development and materials production activities, and (3) to improve curriculum management resources for federal and state decision makers.

Contents

The National Network and its regional centers provide a system through which information about instructional materials and other documents is located and made available to practitioners. In addition, some of the state education agencies and universities affiliated with NNCCVTE maintain curriculum resource laboratories or lending libraries where materials collected from programs in their area are housed, lent out, and sold at cost. Regional center staffs and State Liaison Representatives can also put practitioners in touch with the resources of other information agencies such as ERIC/CE, NCRVE, and NCCE.

Indications of the kinds of career education materials that can be identified through NNCCVTE linkages can been seen in the following examples:

The Curriculum Catalog, published by the Northwest regional center contains 118 titles under the heading of "Career Education," which range from suggestions for individual activities through student booklets and filmstrip sets to teacher and curriculum guides and lists of community resources. Also included are a listing of commercial materials catalogs, with a number of career education titles, and a listing of Lending Library holdings of documents that are available from the center's Olympia, Washington, address. A good many of the titles listed under occupational cluster headings in both the main catalog and the library listings appear to be relevant for career/occupational awareness purposes in career education.

Curriculum Materials 1978, published by the New Jersey Vocational-Technical Curriculum Laboratory and distributed by the Northeast regional center, contains a section on Career Education which includes items on career awareness, learning stations, reading-related activities, work books and guides, bibliographies of resource materials and teacher training titles for the elementary grades. There are also titles dealing with career exploration and training for high school.

An issue of the Newsletter put out by the East Central regional center contains an annotated bibliography of curriculum materials in the arts and humanities, career guidance and exploration and model individualized learning packages.

California affords an example of information services in an individual state. The Spring-Summer issue of "Selected Publications" from the State Department of Education contains a section titled "Vocational, Homemaking, Industrial Arts, Career Education" in which are listed the following:

California State Plan for Vocational Education (1976)
Career Education: A Position Paper on Career Development and Preparation (1974)
Career Preparation Microfiche Collection Catalog (1975)*
Implementing Career Education series: An Administrator's Handbook (1976), Community Involvement (1977), Concept and Process (1977), Exemplary Practices (1977), Instructional Strategies Guide (1977), and Nine Model Practices (1976)
Sources of Information in Career Education: An Annotated Bibliography (1975)
Suggested Guidelines, Goals and Objectives, Work Experience Education (1974).

Services. The main functions of the NNCCVTE are to provide liaison among various resource groups in vocational and technical education and to coordinate the efforts of these groups nationally. The Network is capable of linking with other information systems, including ERIC/CE, RDX, NDN, and NCCE, in order to provide users with a maximum range of leads to available resources. Activities of the Network include the development of common standards for curriculum development and the promotion of cooperative development of materials in order to facilitate sharing and minimize duplication of effort. Regionally, technical assistance is provided in curriculum development and management. Arrangements are also made for inservice training and for field testing and evaluation of programs and materials. Local adoption and adaptation of materials already developed are encouraged.

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*This document was prepared by another information source, the San Mateo County Educational Resources Center (SMERC), an intermediate service agency located in Redwood City, California.

Methodology

User Access. Contact with the National Network is made through the user's State Liaison Representative (SLR) and the Curriculum Coordination Center for the region in which his/her state or territory is located. Each of the six regional centers develops its own program of work. It may conduct curriculum awareness workshops, produce special bibliographies, issue catalogs or information sheets about available materials, publish a newsletter, and/or refer users to other information sources. All centers can initiate national and regional searches to put local developers in touch with appropriate materials and programs. All centers also conduct informational meetings for SLRs and initiate concerted attention to such priorities as sex equity, manpower data analysis, and emerging or changing occupations.

Evaluation

There has been no formal evaluation of the NNCCVTE, the regional centers, or the implementation services of the State Liaison Representatives. However,

records have been kept of Network accomplishments and impact over the last few years. These include: state agreement on common standards for curriculum development which include standardized formats to increase the transportability of materials and programs; inservice training programs in the management and use of instructional materials; diffusion by the centers of existing materials which have been adopted/adapted by local districts; and a steady increase in the number of state and local personnel who have sought Network services, even though participation in the Network is strictly voluntary.[26]

NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION, Bureau of Occupational and Adult Education, U. S. Office of Education

National Center for Research in Vocational Education, The Center for Vocational Education, Ohio State University, 1960 Kenny Road, Columbus, Ohio 43210 (614) 486 3655

Subject Areas: Vocational education - research, leadership development, national planning, evaluation, and dissemination.

Intended Users: State and local leaders and administrators in vocational education and, through them, teachers, students, administrators, counselors, teacher educators, researchers, developers, trainers, supervisors, managers, and planners, including users of other information systems.

Intents/Purposes

The Center was established to meet a need to achieve better and quicker results with vocational education research funds; to effect program improvements in vocational education at the national, state, and local levels; and to focus more sharply on and target the resources for research, demonstration, curriculum development, and the dissemination of results. Specifically, the purposes of the Center are to:

(1) conduct applied research and development on problems of national significance in vocational education;

(2) provide leadership development and inservice education activities for state and local leaders;

(3) disseminate the results of research, development, demonstration, and training projects;

(4) develop and provide information to facilitate national planning and policy development in vocational education;

(5) act as a clearinghouse for information on contracts made by the states, and compile annotated bibliographies of research, exemplary and innovative projects assisted under vocational legislation from FY 1970-77;

(6) work with states, local education agencies, and other public agencies in developing methods of evaluating programs so that those agencies might offer job training programs which are more closely related to the types of jobs actually available in their communities, regions, and states.

Contents

Information. The National Center for Research in Vocational Education (NCRVE) will be taking over and continuing two publications which were started under previous projects at the Center for Vocational Education. One of these is Resources in Vocational Education (RIVE), which was formerly called Abstracts of Instructional and Research Materials in Vocational and Technical Education (AIM/ARM); the other is Current Projects in Vocational Education. RIVE, a bimonthly resource, will have two sections, one containing document resumes of research and curriculum materials in vocational education and related fields funded under the Vocational Amendments of 1968, Public Law 90-576, Parts C, D. I, and J (like AIM/ARM) and the other containing descriptions of current state-administered projects (like the Current Projects publication). The document descriptions in both sections are in the same format as Resources in Education (RIE) from ERIC. [Yearly subscription rate $34]

A look at Volume 10, Number 3 (1977)[32] issue of Resources in Vocational Education reveals subject index headings of Career Awareness, Career Choice, Career Education, Career Education in Arizona, Career Exploration, Career Ladders, Career Opportunities, and Career Planning. Listed under these headings are position papers, curriculum guides, project final reports, and research reports. Of the 25 "Projects in Progress," described in the same issue, two are on career exploration projects at the secondary level, one is on an Experience-Based Career Education (EBCE) model, and one on the implementation of a high school career education program.

The Center will also operate as a clearinghouse for reports and other products of vocational education research and development (R&D), in close cooperation with ERIC/CE, the Smithsonian Science Information Exchange (SSIE), and the National Technical Information Service (NTIS), along with other information systems. An annotated bibliography of state- and federally-administered research will be published, together with annual reports of that same research. A system will also be implemented to improve the access of military-developed technical training materials by civilian vocational educators.

The Center will also disseminate R&D information, including that on curriculum products designed for the unique needs of vocational educators, and especially those products developed with federal funds, and special packages of information on dissemination and utilization activities.

Finally, the Center will be responsible for generating and collecting information relevant to national vocational education needs, applied research and development and curriculum development priorities, Department of Defense curriculum products that could be converted for civilian use, and educational personnel needs.

Services will be provided by the Center in four areas:

(1) The Center is charged with conducting "applied research and development on problems of national significance in vocational education."[31] This includes both studies designated by the U. S. Office of Education and independent studies, but no curriculum development.

(2) Leadership development is to be carried out (a) to provide national, state, and local leaders with up to a year of advanced study on contemporary issues, problems, and trends in vocational education "to enhance productive inquiry about vocational education administration, curriculum development, teacher education, [and] guidance, etc."[31] and (b) to provide inservice training for about 2,000 leaders annually in the form of short work sessions.

(3) The Center will provide assistance and help develop expertise in state and local staff for the evaluation of local programs, and especially for follow-up studies of program leavers and completers.

(4) The Center will engage in national liaison with researchers, practitioners, R&D organizations, and users of R&D in order to facilitate, where appropriate, coordinated planning and development.

Methodology

Leadership Development. The Center will be providing leadership development programs through an Advanced Study Center and a National Academy for Vocational Educators. The Advanced Study Center will invite at least ten leaders to serve as fellows for a year and provide these participants with resources for study, travel, and consultation. The National Academy is to have two distinct in-service program components, both of which will be based on an annual needs assessment to be conducted by the Center. Enrollment in both components is to be built up gradually and both are to be self-supporting cost wise. The first component will involve participants selected on records "of notable accomplishments in vocational education and a promise of future distinction as an educational leader"[31] in two to four month, full-time in-residence classes — three or four classes of about forty each annually. The second component will be designed to serve leaders on an open, non-invitational basis through a series of short, well-focused institutes, seminars, and clinics.

Dissemination and Utilization. The National Center for Research in Vocational Education is to develop and operate a national dissemination and utilization system to serve the users of vocational education research and development information and products and to establish liaison with the dissemination program of the National Institute of Education and the National Diffusion Network (NDN) of the U. S. Office of Education. Yearly studies will be conducted, as part of this effort, to determine the need for special packages of information and products for users, These packages will then be produced and disseminated. Studies will also be made to determine the distribution, utilization, and impact of vocational R&D information and products and leadership training activities will be conducted for the benefit of fifty-six Research Coordinating Units and six Curriculum·Coordinating Centers (of the National Network for Curriculum Coordination in Vocational and Technical Education) in order to improve the dissemination and utilization of R&D information and products.

Clearinghouse. The Center will operate in close liaison with ERIC/CE, the National Technical Information Service (NTIS), and other information systems, a system of accession, collection, storage, and retrieval of reports and other products of vocational education research and development (R&D), including the National Education Practice File Development Project (FILE) and the AIM/ARM project. This means development and operation of: (1) an accessing and "crosswalk" system to submit materials to ERIC, the Smithsonian Science Information Exchange (SSIE), NTIS, and the Interagency Research Information System (IRIS), including the "tracking" of federally supported R&D projects in vocational education in order to assure that information about products yielded by these projects is available for dissemination; and (2) a system of information analysis that will yield bibliographies, descriptions of exemplary and innovative programs, state-of-the-art papers, and annual reports of vocational education R&D, curriculum development, demonstration, and personnel development projects supported by the U. S. Office of Education and the states under current vocational education legislation.

Evaluation

The National Center for Research in Vocational Education has just been established. No information on plans for evaluation of the Center's program was available for this study.

NATIONAL DIFFUSION NETWORK, Division of Educational Replication, Bureau of School Systems, U. S. Office of Education.

ROB #3, Room 3616, 400 Maryland Avenue, S.W., Washington, D.C.
(202) 245 2257

Subject Areas: Exemplary (Joint Dissemination Review Panel-approved) programs in a number of areas, including Career/Vocational Education, Early Childhood Education, Reading/Language Arts/Mathematics, Bilingual/Migrant Education and Special Education. Technical assistance in curriculum planning and development, and especially in the local replication of exemplary programs.

Intended Users: Elementary and secondary schools, public and private.

Intents/Purposes

According to an NDN brochure, the Network is "an expanding nationwide system that offers proven educational alternatives to meet the needs of school-age youngsters and those who educate them.

"NDN's goal is to help local educators solve pressing problems more swiftly, efficiently, and economically through program improvement efforts. The NDN links local school districts, intermediate service agencies, and state departments of education — within and across state boundaries -- so that programs developed in one district and proven effective can be used in other districts facing similar challenges...."[36]

Contents

Information and Programs. Educational Programs That Work[33] lists exemplary programs that are available for dissemination under ten headings. Those titles with direct or indirect relevance for career education have been selected for presentation below.

- Alternative Schools
  - Alternative Learning Project, Providence, R.I. (Educational Alternatives, Career Education, Basic Skills)
  - Experience-Based Career Education [EBCE], Northwest Laboratory (see below)
  - FWL Experience-Based Career Education, San Francisco (see below)
  - FLIT: Functional Literacy, Carmel, Calif. (see below)
  - and 12 other programs.
- Bilingual and Migrant Education
  - Florida Migratory Child Compensatory Program, Tallahassee (Migrant Child Education, Language Arts, Occupational Choice)
  - NOMAD, Lawrence, Mich. (see below)
  - and 16 other programs.
- Career or Vocational Education
  - Alternative Learning Project, Rhode Island (see above)
  - Career Intern Program, Philadelphia, Pa. (Educational Alternatives, Career Education, Dropout Prevention)
  - project ECOlogy: Environmental Career-Oriented Education, Seattle, Wash. (see below)
  - ECOS Training Institute [ETI], New York (see below)
  - Experience-Based Career Education [EBCE], Northwest Regional Laboratory, Portland, Oreg. (Educational Alternatives, Community Involvement, Interdisciplinary Approach)
  - FWL Experience-Based Career Education, Far West Laboratory, San Francisco (Experience-based Learning, Community Involvement, Career Education)
  - FLIT: Functional Literacy, Carmel, Calif. (Basic Skills, Career Education, Remedial Reading)
  - Lincoln County Exemplary Project in Career Education, West Virginia (Career Exploration, Guidance)
  - NOMAD: Needs and Objectives for Migrant Advancement and Development, Lawrence, Mich. (Diagnostic Teaching, Migrant Child Education, Career Choice)
  - Occupational and Career Development, Marietta, Ga. (Career Education, Career Exploration, Community Involvement)
  - Occupational Versatility [O.V.], Tempe, Ariz. (Industrial Arts, Career Education, Independent Study)
  - project R-3: Readiness, Relevance, and Reinforcement, San Jose, Calif. (Individualized Instruction, Heterogeneous Grouping, Cooperative Planning)
  - RBS Experience-Based Career Education, Research for Better Schools, Philadelphia, Pa. (Career Education, Community Involvement, Basic Skills)
  - Secondary Credit Exchange Program, Connell, Wash. (Learning Dropout Prevention, Migrant Education)

St. John Valley Bilingual Education Program, Madawaska, Maine (Bilingual Education, Biculturism, Performance-Based Education)
UCLA Allied Health Professions Publications, Los Angeles, California (Health Occupations, Instructional Materials, Career Education)
Vocational Reading Power (VRP], Bear Lake, Minnesota (Developmental Reading, Inservice Teacher Education, Vocational Education)
Early Childhood/Parent Readiness/Parent Involvement, 57 programs.
Environmental Education, 7 programs.
Organizational Arrangements/Processes/Training, 19 programs.
Reading/Language Arts/Math, 91 programs.
Special Education/Learning Disabilities, 41 programs.
Special Interests: Arts/Communication Skills/Technology, 11 programs.
Special Interests: Health/Human Behavior/Physical Education/Multiple Talent Development, 6 programs.
Also included is a list of Joint Dissemination Review Panel projects with limited availability:
Directory of Representative Work Education Programs, Washington, D.C.
project Talent Development, Miami, Florida,
and 14 other titles.

A Materials Inventory, listing materials needed to adopt each of the exemplary programs, is updated each year and available through ERIC. NDN also publishes a State Facilitator Profile containing descriptive information on each NDN State Facilitator project, a monthly newsletter for NDN members, and numerous other information tools prepared especially for NDN members.

Services. The State Facilitators work directly with public, nonpublic, and private schools in their states to assist in planning for the selection and implementation of one or more exemplary programs. Developer/Demonstrators provide introductory materials and make presentations for interested school personnel, and then work closely with schools who have decided to adopt their programs through training and follow-up assistance.

Methodology

User Access. Those schools who are not already NDN members can contact either a State Facilitator or the Division of Educational Replication in Washington, D. C. Once a program has been selected, the new member then works with the Developer/Demonstrator of that program to obtain help on implementation. The

State Facilitators (SFs), located in state education departments, are funded to help local districts review and select exemplary (JDRP-approved) programs best suited to their needs and to assist making contacts with appropriate D/Ds. The D/Ds are districts which have developed programs which they have evaluated and submitted (successfully) for JDRP approval. D/Ds are funded to help others adopt their programs. (Title IVC and Title I funds from the Elementary and Secondary Education Act are also available to districts for planning.)

The State Facilitator Profile is available through ERIC, or from the Order Department, Far West Laboratory, 1855 Folsom Street, San Francisco, California 94103 [$6.50]. Education Programs That Work is also available from the Far West Laboratory and contains listings of State Facilitators, ESEA Title I Coordinators, ESEA Title I State Migrant Coordinators, and ESEA Title IV Coordinators, in addition to the listings of programs.

Services. The State Facilitators carefully match the interests of local schools with available exemplary programs. They survey school needs within their states, review programs that seem likely to meet those needs, and help arrange information exchanges, staff training, delivery of materials resources, and implementation assistance -- in close coordination with Developer/Demonstrators. SFs may also provide other information services, organizational planning for change, and problem-solving assistance to schools. D/Ds carry out both preview/information sessions about their programs and work intensively with staff members at local sites in teacher training and other implementation activities.

Both the State Facilitators and the Developer/Demonstrators are assisted in their roles by three technical assistance contractors:

(1) The Technical Assistance Brokerage (TAB), operating through five Regional Service Units, works mainly to put SFs and D/Ds needing help in touch with

those (usually other NDN participants) who can provide services. Although at times RSU staff may give direct technical assistance to local sites, the linking of available expertise within the Network is the primary approach. Most services are provided on a one-to-one basis, free of charge or through cost sharing. However, if several projects have similar needs, assistance may be provided in workshops or on a small-group basis. TAB work groups also prepare materials and workshops on critical topics identified by many NDN projects. The TAB contract is manage by CAPLA Associates of Rochelle Park, New Jersey. TAB services are available to all State Facilitators and funded Developer/Demonstrators. As financial resources permit, services will also be provided to unfunded JDRP-approved projects, state departments of education, and intermediate service agencies.

(2) Through the preparation and distribution of a wide range of materials, the ED Materials Support Center works closely to link NDN participants together, to provide the D/Ds with tools that will facilitate their work as disseminators, and to explain NDN's work to the educatonal community. ED services are provided mainly through the publication of materials: some one-time efforts designed to meet specialized needs; others produced on a regular basis. ED is housed at Far West Laboratory in San Francisco, California. All publications produced by ED staff are automatically mailed to all NDN projects and NDN participants are encouraged to contact ED staff with ideas for new publications and/or reactions and revision suggestions for Network tools.

(3) The Title I Technical Assistance Support System. Since the U. S. Office of Education is making a special effort to stimulate the adoption of exemplary compensatory education programs, a specialized technical assistance contract was awarded to The NETWORK of Andover, Massachusetts, to provide support services tailored to the individual needs of exemplary project D/Ds. Projects will also be provided comprehensive information packages in such areas

as school-based change, dissemination and diffusion, and organizational development. A research component will examine questions related to the nature of demonstration projects and their needs for technical assistance.

Evaluation

Currently there are not Network-wide evaluation studies under way. However, NDN's first year activities were evaluated by Magi Educational Services, Inc. The Magi report deals with the NDN activities for the first part of 1974-1975, identifying quantifiable outcomes and processes related to these outcomes. A second evaluation was conducted by the Stanford Research Institute during the 1975-76 school year for the purpose of better understanding the relative effectiveness of NDN's approach to the diffusion of exemplary programs. In future years, as part of the contract obligations, D/Ds and SFs will collect data that will lend itself to analyses of basic trends and accomplishments.

In order to be eligible for federal dissemination support as exemplary, an instructional program developed with federal funding must be approved by the Joint Dissemination Review Panel of the U. S. Office of Education and the National Institute of Education. The review process is initiated when the program's project officer "believes that an intervention supported by the Education Division may be worthy of dissemination as exemplary."[35] The format for submission includes a description of the intervention and evidence of its effectiveness. Review criteria described in the Joint Dissemination Review Panel Idea Book[35] are: (1) Did a change occur? (2) Was the effect consisten enough and observed often enough to be statistically significant? (3) Was the effect educationally significant? (4) Can the intervention be implemented in another location with a reasonable expectation of comparable impact? (5) How likely is it that the observed effects resulted from the intervention? (6) Is the presented evidence believable and interpretable?

"Effectiveness is the sole criterion for approval by the JDRP. No judgments are made regarding the desirability of projects or products from any other standpoint."[35]

NATIONAL TECHNICAL INFORMATION SERVICE, U. S. Department of Commerce.

Information Center and Bookstore, 425 13th Street N. W., Suite 620,
Washington, D.C. 20004 (202) 724 3509
Springfield Operations Center, 5285 Port Royal Road, Springfield, VA 22161
(202) 724 3509 or (703) 557 4650

Subject Areas: Research sponsored by the United States and foreign governments. Topics include: behavior and society, job training and career development, adult education, adolescent attitudes, education, employment, consumer products, computer assisted instruction, information systems, personnel (productivity), peronnel development, teaching methods, teacher pupil interactions, vocational guidance, individualized instruction, and women (role in the workforce).

Intended Users: Mainly businessmen and professionals "accustomed to locating and applying specialized information to problem solving." Also: librarians, local officials, universities, business and industry, public health departments, researchers, etc.

Intents/Purposes

The National Technical Information Service (NTIS) "sells technical reports and other information products of specialized interest under the provisions of Title 15, U. S. Code 1151-7. This law, which established a clearinghouse for scientific, technical, and engineering information, also directs the NTIS to recover its costs from the sales of its products and services."[41]

Most government research is conducted by United States corporations and universities under contracts to meet the specific objectives of government agencies. "The NTIS collection is the largest and best publicly available pool of widely varied research results in the world. . . . Timely and continuous reporting to subscribers is ensured by agreements between NTIS and federal research sponsoring organizations and Special Technology Groups. NTIS is the marketing coordinator for the latter, for their publication, technical inquiries and special analyses.

"NTIS, therefore, is a unique Government agency operating very much as a business; it is sustained only by its customers . . . not by tax supported Congressional appropriation."[41]

Contents

"The National Technical Information Service is a central permanent source of specialized (i.e., business, economic, scientific, social) information of varied origins. NTIS's information is always available; single copies of any of its million titles are printed to order when not in stock...."[41] The NTIS Bibliographic Data File contains 600,000 reports on completed U. S. government research and other analyses, 1964 to the present.

A listing of Selected Research in Microfiche (SRIM)[38,39] categories includes the following headings, some of which may have documents relevant to career education research and development:

43. Problem Solving for Local Government
    Human Resources
    Economic and Community Development . . . .
44. Health Planning
    Environmental and Health Factors
    Personnel Health Care Services . . . .
57. Medicine and Biology
    Occupational Therapy, Physical Therapy, and Rehabilitation . . . .
70. Administration
    Personnel Management, Labor Relations, and Manpower Studies . . . .
84. Space Technology
    Astronautics . . . .
85. Transportation
    Air Transportation
92. Behavior and Society
    Job Training and Career Development: vocational training, on job training, retraining, vocational rehabilitation, use and design of training simulators and equipment, instructional aids, professional development, career development. . . .
    Education, Law, and Humanities: formal education, school systems, educational adminstration, curricula, instructional devices and materials (including audiovisual); teaching methods, computer aided instruction; laws, linguistics, machine translation, fine arts, archeology, history, anthropology, humanities. . . .

A listing of Current Published Searches[42] from the Bibliographic File contains the following headings: Adolescents, Adult Education, Career Development, Civilian Personnel (Career Development), Computer Aided Instruction, Consumer Products, Crime, Criminology, Economic (development, analysis, impact, models), Electronics, Farm Crops, Handicapped Persons, Industry, Instruction (Driver Education), Job Satisfaction, Jobs, Labor Relations (Unions), Manpower, Medical Services, Personnel, Population, Students (Attitudes), Vocational Guidance, Work (Attitudes), and Youth.

Methodology

User Access. NTIS documents can be identified in the following ways:

NTISearch - on-line computer search service [$100 for up to 100 summaries]

Published Searches (from List of Published Searches[42]) [@ $25 per heading]

26 Weekly Newsletters, Weekly Government Abstracts, on various topics (e.g., Behavior and Society), by subscription. [$45 per year]

The Government Reports Announcements and Index, biweekly summaries of Government research. (@ $200 per year]

NTIS Bibliographic Data File is available on tape. [annual lease, $4,000 plus a "negotiated use charge."]

To aid users, there is a NTIS Subject Classification manual,[40] a List of Published Searches,[42] a SRIM Categories leaflet,[38] and the Information Services Catalog[41] [the latter 3 are free]. Copies of whole research reports on which the summaries are based are sold by NTIS in paper copy or microform [1-25 pages, $3.00; 50¢ each additional 25 pages up to 150; 50¢ to 75¢ for each additional 25 pages after that.]

Adding to the Database. Producers of "highly specialized NTIS-type data that would benefit scientists, technicians, economists, businessmen, or social planners"[41] are solicited by NTIS. Those wishing to contribute documents are advised to write to the Assistant Director, Product Program and Administrative Management, NTIS, 5285 Port Royal Road, Springfield, Virginia 22161. All reports are summarized and given descriptors to facilitate searches and cataloguing. Contributors include major universities and corporations, documents come from many sources, including state and local government, the Department of Health, Education and Welfare (ERIC, the National Center for Educational Statistics, NIE, USOE) and many other federal agencies.

Evaluation

No information on any formal evaluation of NTIS was obtained in this study. According to the NTIS contact person, "NTIS encourages feedback and publishes the telephone numbers of the offices in charge of its various services in it catalogs and ads to facilitate user feedback."

III. Comparisons of the Systems

In this chapter the seven systems* are compared on intended users and on the main elements of instructional design, intents/purposes, contents, methodology, and evaluation. Salient points of these comparisons are summarized in Figure 2. For more detail on any of the elements contained in the seven systems, see the descriptions in Chapter II, beginning on page 8.

Briefly, each of the information systems described in Chapter II either has a database of its own or draws upon and refers its readers to one or more other databases. All of the systems offer some kind of technical assistance, at least in the use of their databases, while four provide assistance in curriculum development and the selection and use of instructional materials and four offer assistance in carrying out research, evaluation, needs assessment, and/or clarification of career education. Four of the system are sources of instructional materials in career education, while five of the systems are sources of documents on research, evaluation, policy/theoretical, and other related topics. Three systems include programs at the elementary school level and the other four with programs at the secondary school level and higher.

Intended Users

Those interested in career education information and services appear to approach the field from three main perspectives. (1) First, there are those whose main focus is vocational and technical education and who see career education as an extension of their field, which includes attention to prevocational (but vocationally-oriented) development and education of the individual beginning in the seventh grade (as early as federal vocational education legislation

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*Originally, there were eight systems listed in this study, but AIM/ARM has now been subsumed under the National Center for Research in Vocational Education.

Comparisons of Career Education Information/Assistance Systems

	NCCE	ERIC/CE	RDX	NNCCVTE	NCRVE	NDN	NTIS
USERS							
Teachers/Counselors	P	S	S	S		S	
Administrators	P	P	P	P	P	P	P
Researchers		P	P	S	P	S	P
Elementary Level	P	P**	P		S	P	
Secondary/Postsecondary	P	P	P	P	P	P	P
INTENTS							
Spread	S	S	S	S	S	S	S
Exchange	P	P	P	P	P	P	S
Choice	P	S	P	P	P	P	
Implementation	P		S	P		P	
CONTENTS							
Career Education	P	S	S	S	S	S	S
Vocational/Technical Ed.		P		P	P	S	S
Other		S	P			P	P
Information on:							
Instructional Materials	P	P	S	P	S	S	
Programs/Practices	S	P	P	P	S	P	
Research		P	P	S	P		P
Documents available:							
Abstracts/Summaries	S	P	S*	S*	Thru RIVE	S*	P
For Preview	P	Microfiche		S	Microfiche		
For Purchase	P	EDRS		S	EDRS	With Trng.	P
Technical Assistance on:							
Materials Selection	P		S	P		P	
Program Development	P		P	P		P	
Evaluation	S		P	S	P	S	
Research			P	S	P		
METHODOLOGY							
User Access: Direct	P	P	S	S	S	S	P
Linking Agent	S	S	SEA	SLR	P	SF	S
Restrictions on Access?	No	No	No in 42 states	No	Partial	Partial	No
Computerized Database	Yes	Yes	No	Partial	ERIC	No	Yes

P = Primary Emphasis   S = Secondary Emphasis

*Some through EDRS; some through own catalogs.

**For career education only. ERIC/CE also serves vocational/technical education and adult/continuing education.

will allow). These prevocational programs have traditionally included career guidance courses and consultations focused on school course planning, particularly for students not planning to enroll in the college preparatory, or "academic" course of study in high school.

(2) There is a second group made up of those who have been involved in the post-1970 evolution of career education which began with, but at mid-decade became separated from, vocational/technical education at the federal level. Here the career education emphasis has still been "prevocational" but focused on ways of making standard programs more relevant to students, and on improving the teaching and learning of basic skills subjects, through the infusion of career-related information, concepts, and attitudes into the main subjects of the standard curriculum, starting as early as pre-kindergarten. This view of career education is usually broad enough to include higher education and the professions as well as the more traditional vocational and technical education areas, in addition to career awareness and exploration, in a cradle to grave perspective.

(3) A third group of educators concerned with career education is made up of those who, while not calling themselves career educators, draw upon career education ideas and materials to enhance the teaching of other subject areas such as reading and language arts, mathematics, social studies, and science. The members of this group may tend to tap a wider range of resources than the above two, resources which would include RDX, NDN, ERIC and the other systems, but would also include the various subject area and other professional organizations such as the Association for Supervision and Curriculum Development, the National Assocation for the Education of Young Children, the National Council for the Social Studies, the International Reading Association, and others. Whereas the second group is promoting the infusion of career education topics,

this third group represents the curriculum areas into which the infusions are being made.

Which of these three groups do the seven systems cater to? Only one system (NCCE) is primarily for career educators in the sense of (2) above, while NNCCVTE, NCRVE (and RIVE or AIM/ARM), and (in some ways) ERIC/CE and NTIS fit the group described in (1). It seems reasonable to assume that the first (1) group of users are, or have been, involved with the Bureau of Occupational and Adult Education-supported systems, while those in the second (2) group would more likely identify with the Office of Career Education-supported systems, although the second group would probably overlap with the third (3) group in the use of RDX, NDN, and ERIC/CE. The users of NTIS are hard to identify in terms of their career education involvement although there are groups of users labeled "Secondary School," "Trade School," and "Business/Industry/Professional" in the NTIS records of transactions. Generally speaking, the seven systems are set up to serve, with different emphases, a similar clientele --that is, educators and others, some of whom may be involved with career education of some kind.

However, there are some constraints within some of the systems on just who their career education users will be, when it comes down to specific cases. For example, people in a wide range of roles (including local teachers, parents, and students) might contact ERIC and NCCE directly, whereas the other systems are accessible mainly either (a) through linking agents such as the NNCCVTE State Liaison Representatives, the NDN State Facilitators, and the state department of education contacts for RDX, or (b) by specialists in research or leadership roles, as would be the case with NCRVE. On the other hand, some systems provide or arrange for technical assistance in areas such as program development and materials selection (NCCE, RDX, NDN, and NNCCVTE) and research or evaluation

(NCRVE, NCCE, and NNCCVTE), whereas other systems (ERIC and NTIS) depend much more on user initiative for at least defining the topics to be searched.

Other differences aomng the systems in relation to users include:

(a) The fact that some (like ERIC, NCRVE and RIVE-AIM/ARM, NTIS, and the database of NCCE) are passive sources available to be tapped on user initiative, whereas others (NDN, RDX, NNCCVTE, and NCCE in its training function) meet users at least half way through a variety of outreach activities involving local, state, and regional contact persons.

(b) Except for exploratory orientation sessions for prospective participants which are held by State Facilitators with the help of Developer/Demonstrators, the services of the NDN system are available only to D/Ds who have contracted to work with local sites and others already in the system.

(c) NCCE, NDN, and RDX specialize in instructional programs and materials, and in helping those who want to select and adopt or adapt them, so offer minimal help to those who are interested in research (except as R&D outcomes), whereas the reverse is true for NCRVE and NTIS. ERIC and NNCCVTE serve users with both kinds of interests.

(d) Some of the NNCCVTE services may not be available to some career educators since in some states (e.g., California) career education is adminstered separately from vocational and technical education, and since NNCCVTE does not encompass programs at the elementary school level (although some of the state NNCCVTE affiliates do), whereas NCCE, ERIC, RDX, and NDN offer something for career educators at all levels, even though RDX is available only in 41 states.

Intents/Purposes

The 1977 Dissemination Forum suggested four possible usages for the term dissemination:

Usage 1. Spread: "The one-way casting out of knowledge in all its forms --

information, products, ideas, and materials -- 'as though sowing seeds'."

None of the systems studied appear to fit this model exclusively, with the possible exception of NTIS.

Usage 2. Exchange: "The two-way or multiway flow of information, products, ideas, and materials as to needs, problems, and potential solutions."

All the systems studied fit this model to some degree, with NTIS being the weakest in this respect; RDX, NNCCVTE, NDN, NCRVE, and NCCE being the strongest; and ERIC/CE, RIVE (AIM/ARM, part of NCRVE) perhaps somewhere in the middle.

Usage 3. Choice: "The facilitation of rational consideration and selection among those ideas, materials, outcomes of research and development, effective educational practices, and other knowledge that can be used for the improvement of education."

Five of the systems fit this model: NCCE, NDN, RDX, NNCCVTE, and NCRVE, although emphasizing somewhat different content among them.

Usage 4. Implementation. "The facilitation of adoption, adaptation, and installation of improvements."

Only four systems fit this model: NCCE, NDN, NNCCVTE, and RDX.

Contents

Perhaps the most significant comparisons of the seven systems in this study can be made on the basis of their career education content, of which there are two main kinds: Information, including documents about instructional programs and materials, research and evaluation, and theory and policy; and Services, including resource search and referral, coordination and assistance in program development, assistance in the selection and implementation of instructional materials, training for personnel, and consultation on needs assessment, clarification of career education, evaluation, and research.

Information on Materials and Programs. Of the seven systems, the National Center for Career Education (NCCE) is the only one that specializes in career education exclusively. Although NCCE does hold some shelf documents in other career education areas (e.g., research, policy) for reference, the main NCCE database consists of instructional materials (curriculum guides, teacher guides, teacher training, and student materials) plus computer stored and indexed descriptions of these materials. Most of the NCCE documents are unpublished and locally produced (often as part of NCCE training), but there are some from various career education projects (including the Center for Vocational Education) and a number of commercial items, both print and nonprint materials. Although the NCCE materials are intended primarily for use in training programs to support local curriculum development, copies of all but the commercial items can be obtained (after being identified by computer search) for preview and possible purchase directly from NCCE.

Other systems, while not specializing in career education, also have descriptive listings of some career education materials, as well as copies of the materials themselves in some cases. Three of these systems include elementary school level materials. ERIC/CE indexes and microfilms instructional materials (with the exception of nonprint items) along with other documents, and also makes document summaries available; the National Diffusion Network (NDN) also has listings of instructional materials related to its exemplary programs (which are available through ERIC) and provides descriptions of those programs in Educational Programs That Work[33] under the heading of "Career/Vocational Education;" and the Research and Development Exchange (RDX) lists, in the NIE Catalog, descriptions of some career education programs and related materials (including a number of Experience-Based Career Education models, which are also listed by NDN, ERIC, NNCCVTE, and NCCE) under the heading of "Education and Work (Career Education."

Two other systems are limited mainly to the secondary school (grades 7 - 12) level and beyond. Some National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE) regional centers and state offices list and/or shelve available career education materials and information on career education programs (a few of which are for the elementary school levels, too, as in the case of New Jersey*), along with resources on vocational education. Resources in Vocational Education (once AIM/ARM) has annotated listings of some career education materials in the ERIC format. In addition, what career education-related topics were found in National Technical Information Service (NTIS) listings dealt with adolescents and adults, and especially with Department of Defense vocational training programs for departing soldiers (which are now part of the NCRVE content, too) and programs for the disadvantaged and handicapped job training.

The ERIC/CE, RIVE (AIM/ARM), and some of the RDX, NDN, and NNCCVTE materials and program descriptions can be obtained through ERIC Document Reproduction Service (EDRS) in microfiche or hardcopy, following a search of Resources in Education, RIVE, or the ERIC computer memory. A few of the NNCCVTE regional centers and states either have materials on hand for loan or sale or can refer users to sources, including commercial producers. For the most part, ERIC, RDX, and NDN do not deal with commercial materials, but there are some exceptions.

ERIC/CE and NCCE. In the course of this study questions were raised regarding the NCCE and ERIC/CE databases and a possible overlap between them involving serious duplication of effort and resources. As indicated earlier, NCCE is supposed to bank only instructional materials in career education, although it does maintain a shelf file of a limited number of other documents for reference purposes; while ERIC/CE banks a wide range of documents, including those on research and evaluation, theory and policy, and instructional materials in vocational and technical and adult and continuing education as well as career education. NCCE disseminates materials as part of its training program in curriculum development as well as in response to requests that come by letter and telephone. ERIC/CE assists users in searching the database and identifying what materials are available that might fit their needs, but does not offer assistance in curriculum development or materials selection and implementation.

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* See page 31.

Two approaches were used to compare the contents of these two systems: an analysis of selected RIE listings and requests for parallel searches in the two systems. First of all, the 1976 RIE listings under nine career education-related headings were examined in order to identify those titles which appeared to be instructional materials (i.e., student materials, teacher guides, and course descriptions). These selected titles were then screened, with the help of the NCCE staff, to determine which, if any, were also in the NCCE database. The results were as follows:*

ERIC Heading	No./Titles in ERIC	No./Titles in NCCE
Career Awareness	72	9
Career Choice	7	0
Career Education	220	30
Career Ladders	2	0
Career Opportunities	28	10
Career Oriented Mathematics	4	0
Career Planning	21	0
Careers	1	0
Totals	355	49

In a second comparison, three identical searches were requested of both the ERIC/CE and NCCE systems: (1) descriptions of instructional materials (for both students and teachers) for use in introducting career education topics into the study of mathematics in grades 4 - 6; (2) descriptions of instructional materials for use in introducing career education topics into the study of geometry and general mathematics at the high school level (grades 9 - 12); and (3) evaluation and research studies that show the effects of career education programs on student achievement in basic skills at the high school level. The results of these searches can be summarized as follows:

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*A comprehensive comparison of the two databases might change these preliminary findings, but such a search would be quite costly as the two computer systems are not integrated. There is also evidence that there was more sharing between ERIC and NCCE in the first year of NCCE's existence than there has been more recently.

Grades 4 - 6 Mathematics: 70 titles were identified in the NCCE search and 63 in the ERIC/CE search, with only four titles in common, all of which were 1974 Center for Vocational Education publications.

Grades 9 - 12 Mathematics: 28 titles were identified in the NCCE search and 20 in the ERIC/CE search, with no overlap.

Effects of Career Education Infusion: The ERIC/CE search yielded 63 citations NCCE's response indicated that search requrests on such topics are usually referred to ERIC, but did enclose one record of a reply sent to a user which involved a hand search of the NCCE reference library and yielded four titles. However, there was no overlap between the ERIC/CE and NCCE titles.

Other Information. Information and documents concerning other aspects of career education, as well as many other subject areas, are available from ERIC/CE and NCRVE, two systems which have vocational education as their main emphasis. NTIS, whose scope encompasses mainly non-educational research topics, has a few headings (among them "Job Training" and "Career Development") which may contain some research which is of at least indirect interest to career education,* but NCRVE is now a more likely source for such information since it is supposed to link up directly with NTIS. In addition, RDX works to promote the two-way flow of information — R&D outcomes to users or practitioners, and practitioner needs and interests to R&D people — but, here again, NCRVE is more likely to be useful in this respect for those interested specifically in career education, except perhaps at the elementary school level.

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*No search of the NTIS database was made for this study.

ERIC/CE summarizes and indexes journal articles relevant to career education from a few journals in addition to unpublished research and evaluation reports, theoretical and policy papers, conference summaries, and other types of "fugitive" documents in career education as well as in other educational areas. NCRVE, RDX, and NDN specialize in federally supported R&D outcomes, with NCRVE regularly documenting research in progress as well as research reports. However, only a small proportion of these R&D projects and outcomes -- perhaps less than a quarter -- deal directly with career education as distinct from vocational and technical and other subject areas in education. As indicated earlier, NCCE has some research (and other noninstructional) documents in its shelf collection for reference, but does not index and computer bank these for regular dissemination to users.

ERIC/CE, NCRVE, and NTIS will carry out searches for, and supply resumes of, documents relevant to user interests. All three also package prepared compilations of document descriptions on selected topics. Microfiche or paper copies of ERIC, NCRVE, and some RDX and NDN documents are available from ERIC/EDRS or at the 650 or more ERIC Micrfiche collection locations. NTIS documents must be ordered from NTIS (unless they are also in the ERIC system). NCCE documents are available for both preview and purchase from NCCE.

Services and Technical Assistance. All the systems offer services of some type, ranging from simple referral to other sources and training in information retrieval to long term training programs related to curriculum development or leadership and research skills, Most of the systems have facilities to refer users internally, within the system, or to other sources: RDX through its Resource Referral Service (RRS) and regional exchanges; NDN through its State Facilitators and Regional Service Units: NNCCVTE through State Liaison Representatives; and ERIC/CE, NCCE, NCRVE, and NTIS through national offices. In fact, NCRVE's scope of work involves coordination with many other systems. Career educators can certainly use these referral services to help them to locate needed information and services.

Four of the systems specialize in the development and/or implementation of programs and practices. The main thrust of NCCE is local level curriculum development in career education (pre-kindergarten through grade 12+) through inservice staff training and the utilization of materials from other schools and projects as well as those developed in the course of training. NCCE also carries on shorter orientation and clarification sessions in career education.

NNCCVTE works to facilitate curriculum development in vocational education (including some career education, from grade 7 up) and to help participating agencies to share in the work of others. In contrast, NDN and RDX work mainly to inform local districts (and others) about available programs, materials and other R&D "outcomes" (including some in career education, K - 12+) which have already been developed through a systematic R&D process which includes field testing and evaluation. NDN offers an arrangement in which people from Developer/Demonstrator sites help people from other local sites adopt and adapt exemplary programs, whereas with the RDX, although some assistance in implementation is involved, the main thrust is on the exchange of information and decision making.

Other staff development and consultation services are also available from some of the systems. These include leadership training from NCRVE, and consultation in the areas of needs assessment (NCCE, NNCCVTE, and RDX), program evaluation (NCCE, NNCCVTE, NDN, and NCRVE), and research (NCRVE). Career educators can certainly participate in many of these services.

IV. Issues, Problems, Recommendations

In this section are contained discussions of problems that were found in the course of this study of the seven systems, recommendations for measures to meet the problems, and suggestions for further study.

Sorting Out the Systems

From the consumer, or user, point of view, there is a good deal of confusion as to (1) which of the seven systems offers what kinds of information and/or assistance and (2) which of the systems are accessible to various kinds of users who might be interested in career education, and how. Although the people contacted in the seven systems were very cooperative in supplying the information requested for this study, it still required an extensive amount of digging and analysis to put together the descriptions contained in Chapter II. To date, there is no adequate directory of career education information and technical assistance resources.

Overlap Among the Systems

A "possible overlap of service" was one of the areas of concern that led to the commissioning of this study. However, given a field where there are so many potential users holding a number of differing views of the nature of career education and serving a diverse clientele, it is not apparent on the basis of the information available on the seven systems studied, that there is any serious overlap among them. That is, there is no inefficient redundancy in the sense of two or more systems duplicating one another by offering identical information or services to an identical group of users. What seems more likely is that, if a majority of the school systems and other agencies in the United States wanted extensive assistance in career education programming, there would not be enough capacity in the present systems to accomodate them. With the recent funding of the National Center for Research in Vocational Education, there will be some need to sort out functions with NTIS on government funded research and with ERIC, NCCE, and several of the other systems on the processing of instruction materials, but these look like minor problems.

In discussions with representatives of the various systems about their relationships with one another, there was one significant problem that came to light. This has to do with the fact that NCCE maintains a database of instructional materials which is accessible to users only through the Affiliate Center in Missoula and not through ERIC. Concern was expressed that, first of all, the NCCE database be included in the ERIC system so that it might be available to users through ERIC/CE, computer search vendors, and the more than 650 ERIC Microfiche Collections around the United States and its territories; and secondly, that career education practitioners who have instructional materials to share with others around the country are often confused about the relationship between NCCE and ERIC/CE (often thinking, for example, that materials sent to NCCE are also going into ERIC). In addition, it has been pointed out that the ERIC system includes clearinghouses in a wide range of subject areas, thus giving users potential access to career education-relevant materials which might not have been so labeled by their producers, whereas NCCE users are restricted to the career education-specialized instructional materials database.

In light of the 1977 Dissemination Forum's call for an "integrated resource base of knowledge . . . available through an ERIC-compatible index and a universally available set of access systems,"[44] these appear to be reasonable concerns.

On the other hand, the NCCE staff make two points that are supported in practice by two other systems and a number of users. The first is that the

ERIC system -- and in particular the ERIC Thesaurus descriptors and document resumes -- are better suited to the description of research and evaluation reports and other kinds of documents than to the description of instructional materials. In this view, the ERIC document descriptions do not provide enough of the right kind of information about the instructional characteristics of instructional materials to adequately facilitate the process of search, retrieval, preview and selection of materials that fit local situations, teachers, and students. Moreover, while NCCE can (and has) revised both its descriptors and computer banked descriptions of instructional materials in response to user feedback, once the ERIC resumes and indexes have been published they cannot be changed (although the descriptors to be used in the future can be revised, and full-text searching does allow for searching on the terms used in the document resumes as well as on the assigned descriptors).

The second point made by the NCCE staff is that many instructional materials, and especially those which have been developed by local teachers and not fully field tested and refined, should be selected and implemented in the context of training programs (or similar kinds of technical assistance) that stress curriculum development in career education and the adaptation of materials to local needs and conditions. (ERIC/CE does not offer intensive technical assistance of this kind). Although choice and implementation are important aspects of dissemination, this second point is somewhat weakened in this case by the fact that NCCE also makes instructional materials from its database available directly to users who do not participate in its curriculum development activities (i.e., through custom searches, Initial Search Listings, and Starter Libraries).

Describing Instructional Materials

Nevertheless, the points made by NCCE are important ones to be considered by anyone seriously interested in the effective dissemination of instructional materials and, through the materials, programs in areas such as career education. To facilitate the process of selecting materials that fit local programs and students, it is important that those characteristics of available materials which make them instructional be adequately described and understood so that they can be compared with the instructional characteristics of the programs for which they are being considered. When an educational program is fully described at least four main aspects are described: its purposes, including philosophical basis (e.g., view of career education), goals, and objectives; its contents, including the scope and sequence of the topics and skills covered; its methodology, teaching/learning activities, setting, and approaches; and its means of evaluation, provisions for assessing student status and progress.* Descriptions of instructional materials which are produced for the purpose of storage and retrieval in an information system should cover these same categories of instructional information.**

These four instructional design constructs are used by the Educational Products Information Exchange (EPIE) Institute to produce product descriptions for its reports that can be used in lieu of instructional products themselves during the first stage or two of the selection process in order to narrow down the field of choice.*** But EPIE is not alone in seeing the need for instructional design information. Figure 3 presents outlines of the product description formats employed by four of the systems in this study -- RDX, NDN, NCCE, and

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*In addition to these four, the characteristics of intended users and a number of other kinds of information about materials are useful.

**The 1977 Dissemination Forum agreed that "adequate information should be provided so that users may judge and evaluate these resources for their own purposes."[44]

***See, for example, the Career Education S*E*T* (selection & evaluation tools).[43]

Comparison of Descriptive Categories for Instructional Materials

EPIE Institute	NIE Catalog (RDX)	Educational Programs That Work (NDN)	NCCE	ERIC
IDENTIFICATION				
Title	Title	Title	Title	Title
Author	Contact	Contact [D/D]	Author	Producer
Publisher/Source			Publisher/Source	Sponsoring Agency
Date	Date		(Date)*	Date
Components	Patterns of Use [Components]		Inventory, pages	Availability
Subject/s	Subject Area/s	Descriptors	Instructional Areas	Descriptors
Intended Users	Intended Users and Beneficiaries	Target Audience	Learning Level	Descriptors (incl. Level)*
INTENTS				
Developer's Rationale				
Learner Goals	Goals or Purposes	Description (Goals)*	Description (Goals)*	Resume (Goals)*
Learner Objectives				
CONTENTS				
Scope/Range, Extent	Narrative Description (Content)*	Description (Content)*	Subject Areas Description (Content)*	Resume (Content)*
Sequence				
METHODOLOGY				
Learning Activities	Narrative Description	Description (Methods)*	Methods, Activities	Resume (Methods)*
Learning Setting	Implementation Procedures, Time Req.	Implementation Requirements		
Learning Approach	Patterns of Use			
Teacher Training		Services Available		
MEANS OF EVALUATION				
Purpose, Methods, Content	Assessment Provisions	Evaluation	Evaluation	Resume (Evaluation)*
OTHER CONSIDERATIONS				
Fairness, etc.	Assurances	Assurances		
Evidence of Effectiveness	Claims	Claims		
Cost		Financial Requirements	Price	EDRS Prices

*Parenthesis indicates that the particular category of information is sometimes, but not always, included in the section indicated.

ERIC, as well as EPIE. In the figure it can be seen that there is a strong similarity among the categories of information included, especially across RDX, NDN, NCCE, and EPIE, even though the category labels are different, the information in each category may not be precisely comparable, and headings such as "Narrative Description" and "Description" may include information on two or more instructional design categories. The main rationale for having separate categories is twofold: (a) to increase the probability that the persons writing the product descriptions will include all pertinent instructional design information, and (b) to provide the user of the information with an understanding of just what instructional design elements each materials has (or does not have) provided in it. This is particularly important in regard to the relatively short ERIC resumes and for the ERIC abstractors who have to summarize a wide range of different kinds of documents and may not be primed to include some important instructional information. In addition, if such information is omitted from the document descriptions, then: (a) even with full-text computer searches of the database, some relevant documents may be missed because the information is not there to search on, and (b) if the document descriptions which come out in the search do not contain enough instructional design information about each product, the selectors may have to spend time and money for "hands-on" examination of a wide range of materials instead of being able to narrow the field first on the basis of document descriptions.

Coordination Across Systems

The 1977 Dissemination Forum recommended a nonprescriptive, multipurpose "nationwide dissemination configuration" to help educators "better understand the array of resources available to help them improve the educational system" through the cooperative efforts of a wide range of groups and individuals working to disseminate -- that is, to spread, exchange, and to facilitate the choice (i.e., consideration and selection) and implementation of -- "ideas, materials, outcomes of research and development, effective educational practices, and other knowledge that can be used for the improvement of education."[44] In addition, complementary functions for governmental and other agencies at different levels were suggested.

For the area of career education, models of many of the main elements of such a configuration are already in place -- or very nearly so. One national center (NCCE) is set up to serve as an advocate for the post-1974 Office of Career Education approach to career education (see page 50) and is active in assisting users at all levels in the clarification, development, and implementation of programs as well as in the exchange of instructional materials. NDN and RDX, although not primarily concerned with career education, also offer to users in the field a number of fully developed career education programs, together with state and regional units to help arrange the means for review, selection, and (in the case of NDN) local implementation. The NNCCVTE provides a network of state and regional representatives who work with local school districts and other agencies to facilitate the sharing of curriculum development efforts and instructional materials (presumably some in career education) across regions and states. Although this network stresses vocational and technical more than other aspects of career education (especially since 1974), it does have access to many resources which are appropriate for career education in the broadest sense.

NCRVE (and RIVE, or AIM/ARM) is also focused primarily on vocational education but is set up to both carry out and to help users understand and share R&D outcomes, as well as to provide leadership training and information on instructional materials -- including those relevant to career education. As an affiliate of NCRVE (although sponsored by NIE), ERIC/CE is set up to both collect and make available documents on all aspects of career education (including programs and materials from NDN, RDX, NNCCVTE, and -- potentially -- NCCE, as well as from many other school subject areas) and to help users identify relevant documents within the rest of the ERIC system.

Although the seven systems are not yet fully integrated, all claim to refer their users to the resources of all the other systems, where appropriate. But although most of the parts of a career education "dissemination configuration" have been developed, there remain many gaps and uncoordinated aspects to that configuration as it now operates. The result is that it is still difficult for the consumer, the user of the systems, to identify and acquire the information and services that may be neeeded -- or even to identify the system(s) which may be the sources of information and services. Some (if not most) of these gaps are traceable to the fact that at least five different federal agencies are involved: the Office of Career Education (NCCE), the Bureau of Occupational and Adult Education (NNCCVTE, NCRVE, and AIM/ARM), and the Bureau of Elementary and Secondary Education (NDN) - all under the U.S. Office of Education; the Dissemination and Resources Group of the National Institute of Education (ERIC and RDX); and the Department of Commerce (NTIS). Under present arrangements, some amount of competition among the systems and their sponsoring agencies (especially for funding) seems inevitable and optimum cooperation difficult to achieve. Some of the more obvious gaps in the configuration for career education are as follows:

(1) It is difficult for users to gain an understanding of what services the various systems offer, what relative costs and benefits are related to the use of each system, and what relationships there are among the systems. This means that many users (and potential users) are not receiving enough of the kinds of assistance the systems have been funded to provide.

(2) There is no one retrieval arrangement in which all of the documents in the seven systems -- and especially the instructional materials -- are indexed. Moreover, there is no retrieval arrangement, in or out of the seven systems covered in this study, in which the complete range of instructional materials, commercial and noncommercial -- federally supported or not, are indexed and described in order to give career education practitioners a full range of alternatives from which to select those best suited to local programs and students.

(3) Widely varying standards exist among the seven systems for screening and selecting instructional materials and other documents for inclusion in their databases. (For instructional materials, the range is from the locally produced materials in NCCE and the "fugitive" documents in ERIC to the R&D-based and JDRP-approved products of RDX and NDN.) Within each system, some standards have been developed, but these standards vary across systems, contributing to user confusion -- especially since the standards are not always made explicit to users.

(4) Different formats for describing instructional materials and other products are used by the various systems, making user comparisons of documents held in two or more systems difficult, although for research documents at least several systems have been using the ERIC format, and RIVE (AIM/ARM) uses the ERIC format for instructional materials.

(5) The views of, or approaches to career education which are implicit in the various systems and their products are not always (or often) made explicit to users, and users are not always helped to clarify their own views of career education, so that a good match between programs and products may occur more regularly.

Recommendations

In the light of the problems and gaps just identified, and the comparative analyses of the seven systems presented in earlier sections, the following recommendations are offered:

(1) In order to aid potential users in understanding just what kinds of information and assistance are available from the various career education (and related) systems, it is suggested that a Directory of Career Education Resources be published and kept up to date. This directory could be organized in a format similar to that used in Chapter II of this study, but with the addition of (a) statements describing the particular approaches to career education (to be included in the Intents/Purposes section), and (b) descriptions of the elements of career education listed on page 3 to 4 above (for the Contents section) that are represented in each system. Such a guide should also be expanded in scope to include other resources relevant to career education, such as those in career guidance (for example, the ERIC Clearinghouse on Counseling and Personnel Services, ERIC/CAPS), Teacher Centers, and sources of information on commerical instructional materials for career education programs.

(2) In order to keep career education visible and alive as a concept and process for enriching instructional programs while not being a separate subject area itself (such as mathematics, science or specific vocational technical courses, for example), it is suggested that the National Center for Career Education (NCCE), or some similar system specializing in career education, Kindergarten through grade 12 and beyond, receive continuing support as a national advocate for career education. Such an advocate would work to help educational (and other) agencies (a) to clarify their own needs and approaches in regard to career education, and (b) develop programs and instructional materials for use with their students and clients.

This could mean the continuation and further development of the NCCE Institutional Training Model (see page 14) where staff members of other agencies are trained to provide training in clarification and curriculum development, and the establishment of additional NCCE Affiliate Centers to provide such training — perhaps including among these some of the regional and state units of NNCCVTE and RDX, as well as selected Teacher Centers and university-based agencies.

(3) In order to facilitate the nationwide sharing of instructional materials, information about instructional materials, and the matching of these materials to the needs and requirements of users, the following steps are suggested:

(a) A nationwide format for producing summary descriptions of instructional materials (preferably one patterned after the EPIE instructional design framework described on pages 63--65) should be adopted by the various systems and applied to both print and nonprint (e.g., filmstrips, films) materials.

(b) The format for describing instructional materials should be revisable on the basis of user feedback (much as the NCCE format is now) so that both the indexing descriptors used for retrieval and the summary descriptions banked in the computer can be altered, both for future use and retroactively.

(c) Provisions should be made for the inexpensive preview of instructional materials, patterned perhaps after the lending policies of some of the state and regional NNCCVTE units and NCCE, which might be expanded to supplement the ERIC Microfiche Collection centers and EDRS in the distribution of hardcopy documents.

(d) Uniform standards should be developed for use by career education information and assistance systems in their review of documents to be included in their databases, in order to insure some minimum level of quality across systems. Documents -- and especially instructional materials — which did not meet minimum standards could be put through the process suggested next before being accessioned.

(e) Provisions should be made for the continuing development and refinement, on the basis of feedback from use with learners, of selected instructional materials — especially those with the widest potential range of applications. This refinement process could be accomplished through inservice teacher training sessions in which materials are employed, and through feedback forms sent out regularly with materials that are disseminated.

Once refined, those materials which are component parts of units of instruction in career education could then be entered into the common database for wider dissemination and implementation.

A first step in the implementation of these recommendations might be to have NCCE process all instructional materials received in the future by any of the systems (and determined to be up to minimum standards), while at the same time (a) making its computer tapes available (say, on a yearly lease basis) to other systems and agencies who wish to provide search and retrieval services, and (b) submitting copies of all the materials it recieves and processes to ERIC/CE for microfilming and inclusion in the Resources in Education index, so that potential users might have access to them through the ERIC system.*

Following this step, as the instructional design-type format used by NCCE becomes further refined as a result of its use by, and feedback from, users, the procedures for applying it to the description of instructional materials in career education could be taught to staff members of other systems through (say) a phase of the NCCE training program under the auspices of NNCCVTE and RDX state and regional units. In this way more people would be able to process and describe newly acquired materials for the nationwide network, and at least some of the materials already in the network could be re-described using the new format.

(4) In order to provide career education practitioners with a full range of available instructional materials, including commercial and noncommercial and federally funded or not, from which to make their selections for use in instructional programs, it is suggested that the production of a comprehensive compendium of all currently available materials be commissioned. This compendium should be updated periodically and should include both those materials specifically labeled as career education materials and those with career edu-

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*Eventually, it would be useful, of course, to have the ERIC system revise its format for dealing with all instructional materials, but career education could serve as a pilot area.

cation relevance even though not so labeled.*

Suggestions for Further Study

Due to the limited nature of this study, a number of questions posed in the Scope of Work could not be treated as thoroughly as may be needed for the guidance of future policy. The main questions left at least partially unanswered have to do with: (a) the actual -- as opposed to intended -- users of the various systems, (b) the exact nature of the career education content of some of the systems -- particularly ERIC/CE, NNCCVTE, RIVE (AIM/ARM), and NTIS, and (c) the "utility of responses for the clients served," a question which borders on the "quality of services offered," which was outside the scope of this studied.

In order to supplement the findings of this study, it would be useful to do the following:

(1) In order to guide the development of policies and procedures for fostering the further improvement of ways of delivering information and technical assistance to career education practitioners, a rigorous comparative evaluation of the impact of the seven systems on their users should be carried out. Such an evaluation would analyze user experience with each system ranging from mere awareness of the system's existence, depth of understanding of what it contains, and whether actually used, through assessments of the service provided (efficiency, cost, time, etc.), to assessment of the quality of the information and assistance obtained (e.g., its goodness of fit with the needs that gave rise to the use of the system in the first place).

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*The closest approximation of this recommendation to date is the EPIE Career Education S*E*T* (selection and evaluation tools)[43] which contains only very brief instructional design descriptions of commercial materials (plus a guide to the selection process) but does not include the unpublished materials that would be listed in ERIC/CE or NCCE.

Three studies which could be part of the comparative evaluation suggested above or done separately are:

(a) Analysis of records of users (mail correspondence files, telephone logs, etc.) of the various systems to determine what positions (e.g., teacher, career education director, etc.) are held by users requesting career education information and assistance and what kinds of such information and assistance they request;

(b) Survey a sample of career education practitioners and researchers to determine where they go for information and assistance, what (if anything) they know about the offerings of the seven systems, and what view of career education each one holds; Such a survey could help to determine just how many practitioners the present systems do (or could) reach.

(c) Carry out a comparative computer search of the databases of NCCE, ERIC/CE, and RIVE (AIM/ARM) to determine which documents (and document descriptions) are held in common. Such a search would not only help to answer the question of possible overlap more thoroughly, but would also be a good first step in trying to integrate the systems.

(2) Document systematically the extent to which career education -- especially in the sense of Self-Awareness, Educational Awareness, and Related Competencies, in addition to Career Awareness and Career Preparation (see pages 3-4) are reflected in the databases of various systems, especially those of the NNCCVTE regional and state units and NTIS.

(3) Survey samples of various kinds of career education practitioners to determine the kinds of information about instructional materials they would like to have in order to facilitate review and selection. In addition, a study comparing the selections made (and particularly their goodness of fit with local needs) could be made involving those using instructional design descriptions and descriptions produced in the formats of other systems such as ERIC/CE, RDX, and NNCCVTE.

Appendix I

List of Source Documents

Office of Career Education

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National Center for Career Education

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National Center for Research in Vocational Education/RIVE (AIM/ARM)

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National Diffusion Network

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1977 Dissemination Forum

44. "Statement of Agreement by Professionals in the Field of Educational Dissemination at the June 1977 Dissemination Forum." [Reproduced in No. 23 above.]

Appendix II

List of Persons Contacted

National Center for Career Education

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ERIC Clearinghouse on Career Education

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Dr. Robert Bhaerman, Career Education Specialist
Ms. Ruth Gordon, Program Associate

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*Morton Bachrach, Manager, National Institute of Education
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National Network for Curriculum Coordination in Vocational and Technical Education

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National Technical Information Service

Dr. William Knox, Director
*John W. Hounsell, Writer/Editor

---

* -indicates main contact person/s: system director or person/s designated by the director.

Appendix III

A Comparison of Career Education Information and Technical Assistance Systems

Scope of Work

Considerable efforts have been launched to provide career education practitioners and researchers with up-to-date information and assistance about materials, training strategies, research projects, and other career education activities. The major national systems providing such help are the following: The ERIC Clearinghouse on Career Education; the RDX program of NIE (as applied to career education); AIM/ARM; the National Center for Career Education; the National Network for Curriculum Coordination in Vocational and Technical Education; the National Technical Information Service (DOL); and a soon-to-be awarded contract for a National Center for Research in Vocational Education.

Because of the large number of such assistance systems, questions have been raised by both practitioners and policymakers about the specific services offered by each, possible overlap of services, and/or possible ways to more effectively coordinate the services offered.

The purpose of this paper will be to: (1) Describe the specific services offered by each of the above-referenced systems, including (but not limited to): content of each system; services offered; clients served; procedures for use; cost for each service; service area (geographic); response formats; response time; and utility of responses for clients served; (2) Compare and contrast the various systems in terms of the items in (1) above; and (3) make recommendations on issues to be resolved and steps to be taken to assure maximum coordination and minimum overlap among these various systems.

Due to the limited nature of this award, the contractor will not be asked to evaluate the quality of services offered, although use of existing data which may reflect on quality is certainly allowable.

EPIE

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October 25 1978

Dr. Vincent Barry, Director
National Center for Career Education
University of Montana
P. O. Box 7815
Missoula, MT 59801

Dear Vince:

Here, at long last, is the full text of my comparative study of career education information systems. The report has just been officially accepted by the staff of the Advisory Council, so I am now able to send you and your staff a copy.

Many thanks to you, and especially to Claudia Fahey, for all the help in getting information about your system to me. If you have any questions or comments, please feel free to contact me, although the report itself will be going as is to the full Advisory Council soon.

Sincerely yours,

Dave

David L. Elliott, Head
EPIE Western Projects Office

enc.

APPENDIX D

COOPERATIVE DESIGN FOR CAREER EDUCATION

FINAL REPORT

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INTRODUCTION

This document reports evaluative information gathered by the National Center for Career Education for the Mountain Bell Cooperative Design for Career Education program.

The primary objective of the project was to provide training for Mountain Bell and School District personnel in developing career education instructional units to be used in classrooms with students.

SPECIFIC OBJECTIVES INCLUDED

1) impart an understanding of career education to School District and Mountain Bell personnel
2) help Mountain Bell and School District personnel understand how Mountain Bell employees can become classroom resources
3) assist training participants in the development of a career education instructional unit which incorporates the use of a Mountain Bell employee as a classroom resource.

The information contained in this report reflects the training at four Montana sites including Missoula, Butte, Great Falls, and Helena. At each site a minimum of four Bell employees and four teachers were selected to participate. The four teachers represented a specific learning level (e.g., Missoula-elementary, Butte-high school, Helena and Great Falls-junior high). The four Bell employees represented four major Bell job categories: technical, clerical/administrative, customer service, and managerial. In addition, at the Butte site parents of students were involved as community participants.

The Mountain Bell and School District personnel training involved three distinct sessions. Evaluative information was collected from all three training sessions at all four sites as well as from the subsequent presentations involving the Mountain Bell employee in the classroom with students. Afterthe first training session, Mountain Bell personnel and educators were questioned as to their better understanding of: career education; the complications in implementing career education; the total scope of student needs; and the use of Mountain Bell personnel as instructional resources. (In Attachment A you will find the evaluative questionnaire for Session I).

The second training session evaluation (See Attachment B) would be centered on the preparation for the classroom presentation. Educators and Mountain Bell personnel were asked if they: understood how their presentation could be improved; understood the design of the unit; felt prepared; and, felt more comfortable about the upcoming class presentation.

For the third session evaluation (See Attachment C) Mountain Bell personnel and educators were asked how satisfied they were with the workshops. Also, they had the opportunity to comment on what they thought was most helpful during the workshop and if their thinking about the education process was affected in any way.

EVALUATION OF THE FIRST TRAINING SESSIONS

Tables I through IV depict the responses of Mountain Bell personnel and educators participating in the first session. The first session, a two and one-half day workshop, centered on the presenting of the career education concept as well as allowing the resource persons and educators time for preparing their classroom instructional units. Four educators and four Mountain Bell personnel participated at each site. At Butte, four community participants were present also.

Table I represents the data collected from the Missoula workshop. As may be noted, Mountain Bell personnel did not better understand the meaning of career education as well as did the educators. Mountain Bell personnel also did not respond as favorably as did educators when responding to question 4: I now better understand how Mountain Bell personnel can, as resources, enrich classroom instruction. The understanding of student needs appears to have been the weakest response area for educators and Mountain Bell personnel

The Butte Session I data is represented on Table II. All responses were 3.0 or better, indicating that the objectives were met satisfactorily. As may be noted, responses for community participants are included. Educators seemed least satisfied with their understanding of the total scope of student needs. However, at 3.0 this was still a favorable response.

The Helena results, Table III, show that educators and resource persons responded favorably. One may note that educators did not better understand the total scope of student needs as well as did the Mountain Bell persons.

Data for the Great Falls Session I, again shows favorable response. Educators did not respond as highly as did Mountain Bell personnel to a better understanding of career education, and Mountain Bell personnel did not respond as favorably as did educators to the understanding of how resource people could enrich classroom instruction.

o The data compiled for all responses for Session I is represented by Table V. The results are from 16 educators, 16 Mountain Bell personnel and four community members. Except for the educators' responses to having a better understanding of the total scope of student needs (2.94), all responses are above 3.0, indicating that the objectives for the first session were met.

One may conclude that the program objectives met by Session I were: the understanding of career education by School District and Mountain Bell personnel; and, the understanding of how Mountain Bell employees can become classroom resources.

TABLE I

PARTICIPANTS' EVALUATION OF SESSION I/MSLA
MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

Question		N	Rating Scale	Mean
(1)	I better understand the meaning of career education as a result of this in-service session.	4 (educators)	X 1 2 3 4 no, not at all — unequivocably, yes	3.75
		4 (Bell	X 1 2 3 4	2.75
		8 (combined)	X 1 2 3 4	3.25
(2)	I have a better conception of the possible complications for career education as it relates to an overall educational approach.	4 (educators)	X 1 2 3 4	3.5
		4 (Bell)	X 1 2 3 4	3.25
		8 (combined)	X 1 2 3 4	3.38
(3)	I now better understand the total scope of student needs.	4 (educators)	X 1 2 3 4	3.0
		4 (Bell)	X 1 2 3 4	2.75
		8	X 1 2 3 4	2.88
(4)	I now better understand how Mountain Bell personnel can, as resources, enrich classroom instruction	4 (educators)	X 1 2 3 4	3.75
		4 (Bell)	X 1 2 3 4	2.75
		8 (combined)	X 1 2 3 4	3.25

TABLE II

PARTICIPANTS' EVALUATION OF SESSION I/BUTTE MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

QUESTION	N	RATING SCALE	MEAN
1) I better understand the meaning of career education as a result of this in-service session.	4 (educators)	X 1 2 3 4 no, not at all — unequivocably, yes	4.0
	4 (Bell)	X 1 2 3 4	3.75
	4 (community participants)	X 1 2 3 4	3.75
	12 (combined)	X 1 2 3 4	3.83
) I have a better conception of the possible complications for career education as it relates to an overall educational approach.	4 (educators)	X 1 2 3 4	3.5
	4 (Bell)	X 1 2 3 4	3.75
	4 (community participants)	X 1 2 3 4	3.75
	12 (combined)	X 1 2 3 4	3.67
3) I now better understand the total scope of student needs.	4 (educators)	X 1 2 3 4	3.0
	4 (Bell)	X 1 2 3 4	3.5
	4 (community participants)	X 1 2 3 4	4.0
	42 (combined)	X 1 2 3 4	3.5

TABLE II (continued)

PARTICIPANTS' EVALUATION OF SESSION I/BUTTE MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

QUESTION	N	RATING SCALE	MEAN
4) I now better understand how Mountain Bell personnel can, as resources, enrich classroom instruction.	4 (educators)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' 4 no, not at all ... unequivocably, yes	3.5
	4 (Bell)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' 4	3.5
	4 (community participants)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' 4	3.5
	12 (combined)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' 4	3.5

TABLE III

PARTICIPANTS' EVALUATION OF SESSION I/HELENA MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

Question	N	Rating Scale	Mean
(1) I better understand the meaning of career education as a result of this in-service session.	4 (educators)	X 1 2 3 4 no, not at all; unequivocably, yes	3.5
	4 (Bell)	X 1 2 3 4	3.5
	8 (combined)	X 1 2 3 4	3.5
(2) I have a better conception of the possible complications for career education as it relates to an overall educational approach.	4 (educators)	X 1 2 3 4	3.5
	4 (Bell)	X 1 2 3 4	3.0
	8 (combined)	X 1 2 3 4	3.25
(3) I now better understand the total scope of student needs.	4 (educators)	X 1 2 3 4	2.75
	4 (Bell)	X 1 2 3 4	3.5
	8 (combined)	X 1 2 3 4	3.13
(4) I now better understand how Mountain Bell personnel can, as resources, enrich classroom instruction.	4 (educators)	X 1 2 3 4	3.5
	4	X 1 2 3 4	3.5
	8 (combined)	X 1 2 3 4	3.5

TABLE IV

PARTICIPANTS' EVALUATION OF SESSION I/GREAT FALLS MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

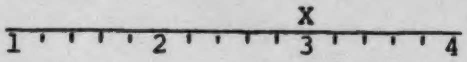
Question	N	Rating Scale	Mean
(1) I better understand the meaning of career education as a result of this in-service session.	4 (educators)	 no, not at all / unequivocably, yes	3.0
	4 (Bell)		3.5
	8 (combined)		3.25
(2) I have a better conception of the possible complications for career education as it relates to an overall educational approach	4 (educators)		3.0
	4 (Bell)		3.25
	8		3.13
(3) I now better understand the total scope of student needs.	4 (educators)		3.0
	4 (Bell)		3.0
	8 (combined)		3.0
(4) I now better understand how Mountain Bell personnel can, as resources, enrich classroom instruction.	4 (educators)		3.25
	4 (Bell)		2.75
	8 (combined)		3.0

TABLE V

PARTICIPANTS' EVALUATION OF SESSION I/ALL SITES MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

QUESTION	N	RATING SCALE	MEAN
1) I better understand the meaning of career education as a result of this in-service session.	16 (educators)	X 1 2 3 4 no, not at all … unequivocably, yes	3.56
	16 (Bell)	X 1 2 3 4	3.38
	4 (community participants)	X 1 2 3 4	3.75
	36 (combined)	X 1 2 3 4	3.5
2) I have a better conception of the possible complications for career education as it relates to an overall educational approach.	16 (educators)	X 1 2 3 4	3.38
	16 (Bell)	X 1 2 3 4	3.31
	4 (community participants)	X 1 2 3 4	3.75
	36 (combined)	X 1 2 3 4	3.39

TABLE V (continued)

PARTICIPANTS' EVALUATION OF SESSION I/ALL SITES
MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

QUESTION	N	RATING SCALE	MEAN
3) I now better understand the total scope of student needs.	16 (educators)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' ' 4 no, not at all … unequivocably, yes	2.94
	16 (Bell)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' ' 4	3.19
	4 (community participants)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' ' 4	4.00
	36 (combined)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' ' 4	3.17
4) I have a better conception of the possible complications for career education as it relates to an overall educational approach.	16 (educators)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' ' 4	3.5
	16 (Bell)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' ' 4	3.13
	4 (community participants)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' ' 4	3.5
	16 (combined)	X 1 ' ' ' ' ' 2 ' ' ' ' ' 3 ' ' ' ' ' 4	3.33

EVALUATION OF THE SECOND TRAINING SESSION

The second session, a two day workshop, focused on the goals of: reinforcing the infusion concepts of career education; evaluating and revising class presentations designed in the first session; writing other class presentations; and planning the field testing of the presentations and their evaluations. In short, the second sessions centered on the development of career education instructional units which would incorporate the use of a Mountain Bell employee as a classroom resource. Four educators and four Mountain Bell representatives participated in each of the four sites.

Tables VI thorugh IX depict the responses of the participants to the second session's evaluation questions.

The responses of the Missoula participants (Table VI) are quite positive. The lowest evaluation (3.0) was from the Mountain Bell personnel in response to whether participation in the Mountain Bell work site visit provided an opportunity to better prepare for the next school visitation.

Both Mountain Bell and school personnel of the Butte group (Table VII) responded that they did not feel the opportunity to work with their partners in the revision of the presentation helped them to gain a better understanding of how the presentation could be improved (2.5 and 2.0 respectively). The data does not clarify whether the opportunity was not helpful at all or perhaps was not necessary. Mountain Bell participants responded lower than school participants that participation in the Mountain Bell work site visit provided an opportunity to better prepare for the next school visitation (2.75 and 3.25 respectively). Again, the data does not lend itself to an interpretation of the difference.

The evaluation responses from Helena, Table VIII, are all quite positive. There are no appreciable differences between Mountain Bell and educator responses.

The results of the Great Falls participants (Table IX), show that educators scored lower than the Mountain Bell personnel in having a better idea of the unit design (3.0 and 3.5 respectively) and that the Mountain Bell people scored lower than the educators in feeling that participation in the work site visit provided an opportunity to better prepare for the next school visitation.

Table X presents the evaluation results for the second session workshop. As a whole, educators (2.81) scored lower than Mountain Bell personnel (3.56) for question 2: I now have a better idea of the unit design. Educators apparently felt that the Mountain Bell work site visit provided them with an opportunity to better prepare for the next school visitation more so than did the Mountain Bell resource people (3.81 and 3.0 respectively). Other responses did not show appreciable differences between Mountain Bell and school personnel.

The data indicates that the objective to "assist training participants in the development of a career education instructional unit which incorporates the use of a Mountain Bell employee as a classroom resource" was met during the second session workshop.

TABLE VI

PARTICIPANTS' EVALUATION OF SESSION II/MISSOULA MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

Question	N	Rating Scale	Mean
(1) The opportunity to work with my partner in the revision of the presentation helped me to gain a better understanding of how the presentation could be improved.	4 (educators)	X 1 2 3 4 no, not at all · unequivocably, yes	4.0
	4 (Bell)	X 1 2 3 4	3.75
	8 (combined)	X 1 2 3 4	3.88
(2) I now have a better idea of the unit design.	4 (educators)	X 1 2 3 4	3.75
	4 (Bell)	X 1 2 3 4	3.25
	8 (combined)	X 1 2 3 4	3.50
(3) Participation in the Mountain Bell work site visit provided an opportunity for me to better prepare for the next school visitation.	4 (educators)	X 1 2 3 4	4.0
	4 (Bell)	X 1 2 3 4	3.0
	8 (combined)	X 1 2 3 4	3.5
(4) I feel more comfortable with the upcoming Mountain Bell school visitation than I did before the first visitation.	4 (educators)	X 1 2 3 4	4.0
	4 (Bell)	X 1 2 3 4	4.0
	8 (combined)	X 1 2 3 4	4.0

TABLE VII

PARTICIPANTS' EVALUATION OF SESSION II/BUTTE MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

Question	N	Rating Scale	Mean
(1) The opportunity to work with my partner in the revision of the presentation helped me to gain a better understanding of how the presentation could be improved.	4 (educators)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4 no, not at all — unequivocably, yes	2.0
	4 (Bell)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	2.5
	8 (combined)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	2.25
(2) I now have a better idea of the unit design.	4 (educators)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	3.25
	4 (Bell)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	4.0
	8 (combined)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	3.63
(3) Participation in the Mountain Bell work site visit provided an opportunity for me to better prepare for the next school visitation.	4 (educators)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	3.25
	4 (Bell)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	2.75
	8 (combined)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	3.0
(4) I feel more comfortable with the upcoming Mountain Bell school visitation than I did before the first visitation.	4 (educators)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	4.0
	4 (Bell)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	4.0
	8 (combined)	X 1 ' ' ' ' 2 ' ' ' ' 3 ' ' ' ' 4	4.0

TABLE VIII

PARTICIPANTS' EVALUATION OF SESSION II/HELENA MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

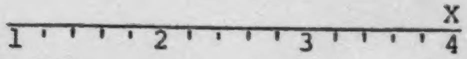
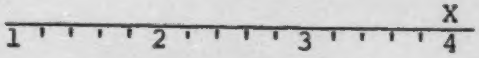
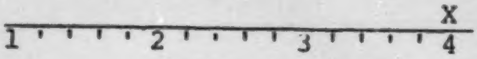
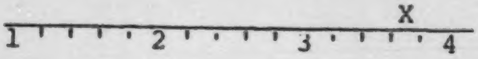
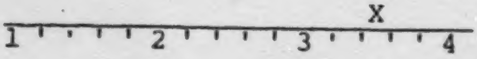
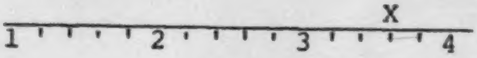
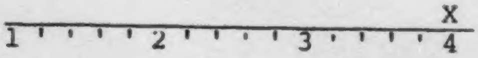
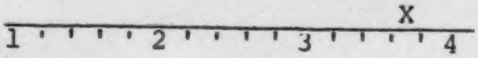
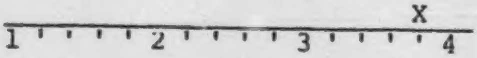
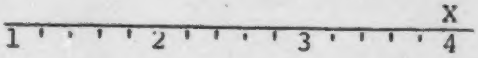
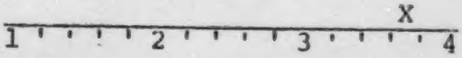
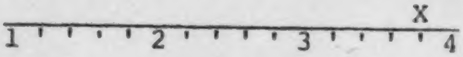
Question	N	Rating Scale	Mean
(1) The opportunity to work with my partner in the revision of the presentation helped me to gain a better understanding of how the presentation could be improved.	4 (educators)	 no, not at all unequivocably, yes	4.0
	4 (Bell)		4.0
	8 (combined)		4.0
(2) I now have a better idea of the unit design.	4 (educators)		3.75
	4 (Bell)		3.5
	8 (combined)		3.63
(3) Participation in the Mountain Bell work site visit provided an opportunity for me to better prepare for the next school visitation.	4 (educators)		4.0
	4 (Bell)		3.75
	8 (combined)		3.88
(4) I feel more comfortable with the upcoming Mountain Bell school visitation than I did before the first visitation.	4 (educators)		4.0
	4 (Bell)		3.75
	8 (combined)		3.88

TABLE IX

PARTICIPANTS' EVALUATION OF SESSION II/GREAT FALLS MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

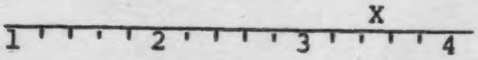
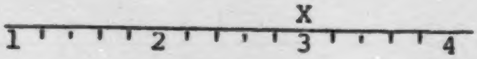
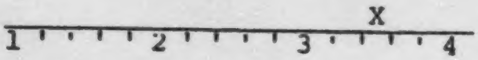
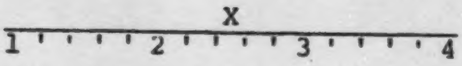
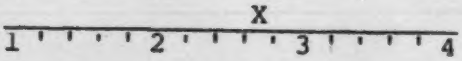
Question	N	Rating Scale	Mean
(1) The opportunity to work with my partner in the revision of the presentation helped me to gain a better understanding of how the presentation could be improved.	4 (educa-	no, not at all — unequivocably, yes	3.5
	4 (Bell)		3.5
	8 (combined)		3.5
(2) I now have a better idea of the unit design.	4 (educators)		3.0
	4 (Bell)		3.5
	8 (combined)		3.25
(3) Participation in the Mountain Bell work site visit provided an opportunity for me to better prepare for the next school visitation.	4 (educa-		3.0
	4 (Bell)		2.5
	8 (combined)		2.75
(4) I feel more comfortable with the upcoming Mountain Bell school visitation than I did before the first visitation.	4 (educators)		3.25
	4 (Bell)		3.25
	8 (combined)		3.25

TABLE X

PARTICIPANTS' EVALUATION OF SESSION II/TOTAL SITES MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

QUESTION	N	RATING SCALE	MEAN
1) The opportunity to work with my partner in the revision of the presentation helped me to gain a better understanding of how the presentation could be improved.	16 (educators)	X 1 2 3 4 no, not at all — unequivocably, yes	3.38
	16 (Bell)	X 1 2 3 4	3.44
	32 (combined)	X 1 2 3 4	3.41
) I now have a better idea of the unit design.	16 (educators)	X 1 2 3 4	3.44
	16 (Bell)	X 1 2 3 4	3.56
	32 (combined)	X 1 2 3 4	3.50
) Participation in the Mountain Bell work site visit provided an opportunity for me to better prepare for the next school visitation.	16 (educators)	X 1 2 3 4	3.81
	16 (Bell)	X 1 2 3 4	3.0
	32 (combined)	X 1 2 3 4	3.41
) I feel more comfortable with the upcoming Mountain Bell School visitation than I did before the 1st visitation.	16 (educators)	X 1 2 3 4	3.81
	16 (Bell)	X 1 2 3 4	3.75
	32 (combined)	X 1 2 3 4	3.78

EVALUATION OF THE THIRD TRAINING SESSION

The third training session was directed towards reporting the results of the actual presentations of the instructional units, discussion of future implementations of instructional units, and evaluations of the total workshop. The total program evaluation consisted of four questions. Three of the questions asked for comments (How have these workshops affected your thinking about education? What activities, resources, or experiences in these workshops were particularly good or helpful? and, What factor or factors contributed most to your feeling this way?). One question asked for a scaled response to how satisfied each participant was with the workshop. Four Mountain Bell personnel and four educators participated at each of the four sites. Tables XI through XIV show the response from the individual sites and Table XV depicts the total responses. The responses to the questions requiring verbal answers may be found in Attachment D.

The Missoula results (Table XI) show that the educators (5.5) responded that they were more satisfied, personally, with the workshop than were the Mountain Bell personnel (4.5).

Butte Mountain Bell participants (5.75) responded more favorably than did the Butte educators (4.75) to the same question (Table XII).

From Tables XIII and XIV one may observe that both Mountain Bell and education participants responded quite favorably in regards to their personal satisfaction with the workshops, and that their responses showed no great variance.

The total responses from both educators (5.19) and Mountain Bell personnel (5.25) show that they were highly satisfied with the workshops (Table XV).

The verbal responses to Questions 1, 2, and 4 were generally quite positive (See Attachment D). The responses to Question 1, "How have these workshops affected your thinking about education?", can best be summarized by one respondant's answer:

> " Primarily, these workshops have renewed my awareness that our education system should be aimed at reality. Theory must be put into use--be it aesthetic or pragmatic. Schools should help to prepare students for life, and there's no real life without learning; therefore, we must constantly be aware that we must foster the concept of education which reveals education as a life-long process which can enrich people's lives. We all need reminders, be they from workshops or some other stimulants."

In answer to "What activities, resources, or experiences in these workshops were particularly good or helpful?", most participants mentioned the importance of actually experiencing events in order to learn from them. These experiences related to the student hands-on activities, the interactions of the Mountain Bell and school personnel, and the participation in the instructional units.

Question four, "What factor or factors contributed most to your feeling this way?" was subsequent to question three, "How satisfied were you personally with the workshops?". Most responses centered on the satisfaction gained from participating with the actual instructional unit presentation. Some dissatisfaction was expressed with the ambiguity of the assignment and workshop meetings. In general, the responses were very positive.

TABLE XI

PARTICIPANTS' EVALUATION OF SESSION III/MISSOULA MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

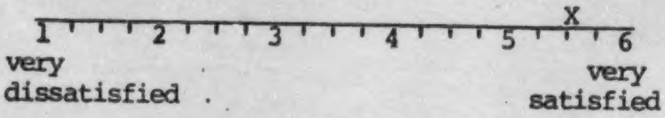
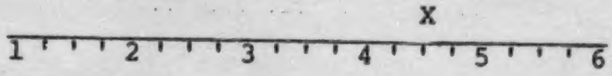
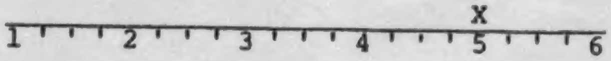
QUESTION	N	RATING SCALE	Mean
(3) How satisfied were you personally with the workshops?	4 (educators)		5.5
	4 (Bell)		4.5
	8 (combined)		5.0

TABLE XII

PARTICIPANTS' EVALUATION OF SESSION III/BUTTE MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

QUESTION	N	RATING SCALE	MEAN
3) How satisfied were you personally with the workshops?	4 (educators)	X 1 2 3 4 5 6 very dissatisfied — very satisfied	4.75
	4 (Bell)	X 1 2 3 4 5 6	5.75
	8 (combined)	X 1 2 3 4 5 6	5.25

TABLE XIII

PARTICIPANTS' EVALUATION OF SESSION III/HELENA MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

ESTION	N	RATING SCALE	MEAN
) How satisfied were you personally with the workshops?	4 (educators)	X 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6 very dissatisfied — very satisfied	5.25
	4 (Bell)	X 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6	5.5
	8 (combined)	X 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6	5.38

TABLE XIV

PARTICIPANTS' EVALUATION OF SESSION III/GREAT FALLS MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

QUESTION	N	RATING SCALE	MEAN
(3) How satisfied were you personally with the workshops?	4 (educators)	X 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6 very dissatisfied very satisfied	5.25
	4 (Bell)	X 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6	5.25
	8 (combined)	X 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6	5.25

TABLE XV

PARTICIPANTS' EVALUATION OF SESSION III/TOTAL SITES
MONTANA MOUNTAIN BELL/SCHOOL DISTRICT EDUCATION WORKSHOP

QUESTION	N	RATING SCALE	MEAN
3) How satisfied were you personally with the workshops?	16 (educators)	X (between 5 and 6) 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6 very dissatisfied — very satisfied	5.19
	16 (Bell)	X 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6	5.25
	32 (combined)	X 1 ' ' ' 2 ' ' ' 3 ' ' ' 4 ' ' ' 5 ' ' ' 6	5.22

The responses to items 1, 2, and 4 from the 3rd session evaluation forms required written rather than numerical answers. The responses to the items are presented below.

The responses by item are broken down by site, and further segregated by educator vs Mountain Bell participants.

Missoula - Site I

Item 1

Educators: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

"I think that these workshops have helped me to realize how 'boxed in' we get with routine assigned curriculum. It forced me to be more creative in my thinking and my teaching."

"Fostered positive attitudes relative to community resources in instructional situations and greater knowledge pertinent to Career Education and its role in the classroom."

"Reaffirmed many of the ideas I had but extended my thoughts as to other possibilities of using community resources. Perhaps the workshop gave me new inspiration for teaching. Sometimes, we take the easy way out and get in a rut."

"Reinforced the positive attitude and its importance towards students."

Mountain Bell: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

" It has always been my belief that education should include as many different experiences in as many areas as possible. This program has greatly reinforced this philosophy for me, as well as open up the wide possibilities that are available if one is open to them. The concept of career education as presented in the workshop was new for me, though it actually tied together many ideas I have had as well as open up new possibilities."

"I now have better insight into 'teacher classroom' problems. The effect of the workshops on my thinking regarding education did not change much."

"It has given me a better understanding of how career education is provided by incorporating it within a unit of study."

"Education is not a process that takes place in school alone--there can and should be many people, both educators and others involved and perhaps the schools have not used enough outside help."

"These sessions have made me realize some of the problems teachers encounter outside of the ones we are familiar with from our children. Working in the classrooms gave me a broader sense of situations which arise in today's education."

Butte - Site II
Item 1

Educators: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

"Realizing the importance of developing skills in students that make them employable."

"In relation to career education, it appears to me that there should be additional work and planning effected. I feel our educational system can be much more helpful in assisting students plan careers."

"They have opened my eyes to the various opportunities available to students, and the role I should play as a teacher in making every career opportunity available to my students within the realm of reality. I have met some fine people who have helped broaden my educational experiences."

"Primarily, these workshops have renewed my awareness that our education system should be aimed at reality. Theory must be put into use - be it aesthetic or pragmatic. Schools should help to prepare students for life, and there's no real life without learning; therefore, we must constantly be aware that we must foster the concept of education which reveals education as a life-long process which can enrich people's lives. We all need reminders, be they from workshops or some other stimulants."

Mountain Bell: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

"It leads me to believe that teachers do care about what knowledge the students take from the school to the outside world."

"It has made me understand and realize much more how important the process of education is and that it is an ongoing process."

"Our educational system is not perfect and outside assistance is beneficial."

"It has awakened me to the problems that teachers and students face in a day to day classroom atmosphere. Having two small children makes me realize how much more involved I want to become in their education and development in preparing for our existing world and society."

Butte Community Person: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

"They have demonstrated the honest interest of teachers in the growth of their students and showed how the shrinking 'job market' for graduates required competence in skills that can transfer easily to many careers. They have also shown the great importance of parental attitudes and the importance of some self-assessment and planning for students."

Helena - Site III
Item 1

Educators: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

"Education itself has the ability to absorb, utilize and benefit from the expertise of 'non-educators'. The educational community often isolates itself from the practical world, and therefore the student."

"I believe that using professional people from industry and business as resource people in my classroom will help me to bring the real world of science into the minds of science students. Because of the workshop experience, I plan to use outside people as part of my course material."

"Junior High Math - It has taken the abstract out of math in both areas (percents and statistics) and showed how it could be used in the 'real' world."

"These workshops have not effected my thinking about education at all; they have affected, however my thoughts. The workshops opened up for me many excellent ideas for developing social studies units from a study of cities, towns, and rural areas to the purpose of evaluations in school and the business world."

Mountain Bell: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

"Relevance does not come easy. I imagine this would especially be true in the teacher's place - having to teach five days a week and several classes a day."

"It has given me a better understanding of what the teacher has to go through in order to teach, at a certain grade level. The need for more input is also helpful!"

"Stressed importance of education outside elementary, junior, and secondary school classroom. Career does not mean vo-tech education and the education process is not first answerable to school districts but to entire community and community members should make a more positive working contribution to the system."

"My thinking on education was on the negative side; now I feel more responsive to it."

Great Falls - Site IV
Item 1

Educators: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

"The workshops have reinforced my ideas about having outside people brought into the classroom to enrich and supplement the regular educational material. I feel that it has been a positive step in that direction."

"Education is not restricted to the classroom - people in all walks of life may contribute to the educational process."

"I believe that this workshop has reemphasized the importance of discussing and exploring the world of work with young people and utilizing resources within the community."

"The employees from industries and other companies have much to contribute; however, it takes much long range planning and working together in order to bring Career Education into the classroom."

"The students will benefit by more community interaction with businesses in the community. Business community = the schools= relevancy for the student."

"I have always thought that our system of education has been lacking in preparing students for the tools they need to face the 'real world'. The workshop reinforced this concept."

Mountain Bell: HOW HAVE THESE WORKSHOPS AFFECTED YOUR THINKING ABOUT EDUCATION?

"I have learned that teachers do earn their wages. Education is an ongoing process for both the student and teacher and time is always working against us all."

"There is a definite need for career education in the schools. Education is a long but necessary thing."

"It has served primarily as reinforcement for a prior opinion regarding education, that the teacher is the critical element and the subject matter is incidental."

"The workshops have helped me see the education process as an on-going thing rather than twelve years of classroom learning."

Missoula - Site I
Item 2

Educators: WHAT ACTIVITIES, RESOURCES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

"Dr. Clapsaddle's introduction really sparked some thinking. He gave us an opportunity to express our ideas on jobs, careers, skills, occupations, etc. He gave us many new ideas to think about and explore as educators. He was a 'good' motivator and easy to work with. A good teacher."

"The small group sessions (first sessions), simulated unit (Yellow Brick Road), and time to work on the unit with input from Mountain Bell representatives."

"All of them were helpful. One activity seemed to flow into the next."

"The basic overview of Career Education at the first meeting and the visit to Mountain Bell (best if only two hours, not ½ day)."

Mountain Bell: WHAT ACTIVITIES, RESOURCES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

"The experience of working with the teachers helped me to get a working understanding of the concept of Career Education, and how it could be put into practice."

"The actual classroom experience was most helpful."

"I found the initial lectures to be the most interesting part of the workshop. The support in locating materials to take to the classroom was great."

"The interaction of the people at the workshops, the time allowed for this interaction and the relaxed open atmosphere. Also, having a unit of study to use as a model is neat."

"Finding out what is involved in making units and getting them at each age group level and involving different subjects in a unit totally different."

Butte - Site II
Item 2

Educators: WHAT ACTIVITIES, RESOURCES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

"Working with the Mountain Bell people was very helpful. The students involved in our presentations also reflected this feeling."

"The experiences gained from working with career-oriented individuals has broadened my background. I am sure I will be able to incorporate my experiences into my class work which should be of great value to my students."

"Classroom work with our developed career related unit."

"Discussion is a particularly helpful tool. Sharing ideas provides insights as well as new ideas. Having community resource people share in planning is an excellent idea, though I feel many of them could be more effective if they had more training. It has to be difficult to teach when one has little or no training and/or experience."

Mountain Bell: WHAT ACTIVITIES, RESOURCES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

" That there were people from the community present that wanted to contribute to the general purpose of the group, career education."

"Talking with the students and helping them understand how important education is was very satisfying. The students related well with me as a Mountain Bell employee. Evaluating the film, discussions, and questions with students gave me an opportunity to express my opinions and thinking."

"Working directly with the educator was helpful and enlighting."

"Having ideas brought to our attention and everyone joining in to discuss and elaborate."

Community Person: WHAT RESOURCES, ACTIVITIES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

"Group discussions (whole group), small group involvement, and the film 'Cipher in the Snow'."

Helena - Site III
Item 2

Educators: WHAT ACTIVITIES, RESOURCES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

"The communication between two seemingly different 'corporate structures', proved that there really is a common ground between the two and that common ground is beneficial to student learning when introduced into the classroom."

"Meeting and visiting with the employees set up the groundwork for us to work together and express our ideas on a variety of subject matter. The tour of the plant in town has given me an additional experience to relate with students as well as the practical knowledge gained from the Bell employees."

"Percents were used in figuring payrolls, taxes, Social Security, and how much is deducted from a pay check and why. Statistics - phone books, phone models, survey sheets, etc. were all very well used."

"Meeting Mountain Bell employees and discussing with them their jobs and their attitudes toward the corporation itself were particularly worthwhile. I also enjoyed, and hope the Ma Bell employees did too, sharing with them my school experience. These workshops were good public relations for both Ma Bell and School District #1."

Mountain Bell: WHAT ACTIVITIES, RESOURCES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

"Hands on - this is where students are given their own material to work with and keep."

"The input from a business standpoint can help the teacher to a great extent in getting his point across. It also has the chance for the student to relate to the outside world in his studies."

"Group meetings with Eric and Mike at Helena Junior High and seeing teachers in class of students. Group discussions regarding teaching experiences in classrooms and actual teaching experience."

"The mini-activities which led us to our inner resources to problem solving by a seemingly unrelated subject."

Great Falls - Site IV
Item 2

Educators: WHAT ACTIVITIES, RESOURCES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

"Getting together with the resource person and planning and learning about each other's work in preparation for the classroom presentation."

"ALL of them. Since I did not personally become involved in a teacher-Bell team I benefited from all their experiences."

"Having a resource person visit our classes, having her work with the students, and giving them honest, realistic insights related to career goals."

"The field trip to the phone company with the purpose of exploring various vocations and the planning of activities with the Bell employee and the sharing of information."

"Being able to use the tele-trainer has been of great value to me in my careers class and just being involved with Mountain Bell has given me a better knowledge of how the company operates which is important for my educator."

"Seeing how Mountain Bell functions gave a feeling for the company that I did not have before. The Mountain Bell employee was very informative which gave the students an understanding of the business world."

Mountain Bell: WHAT ACTIVITIES, RESOURCES, OR EXPERIENCES IN THESE WORKSHOPS WERE PARTICULARLY GOOD OR HELPFUL?

"Films, group discussions, field trips, and various worksheets."

"Being able to sit and talk about student problems to teachers and Bell employees. The Bell films were great!"

"The classroom activity was the most significant in regard to Question #1 and in terms of 'real' contribution to the workshop as a whole."

"Seeing how the teacher handles his class first hand and how outisde resource people could help in the learning process given the correct timing factor."

Site I - Missoula
Item 4

Educators: WHAT FACTOR OR FACTORS CONTRIBUTED MOST TO YOUR FEELING THIS WAY? (Subsequent to item 3)

"I feel that I've created a new and interesting unit that I can continue to add to and subtract from and adapt to my different classes. I feel satisfied that this is a worthwhile learning tool and will be readily accepted by other teachers. I really felt comfortable with the Mountain Bell employee that I worked with. Janice Tate was very accomodating and cooperative. She was well prepared and always willing to help in any way she could. I felt that there was a close friendly feeling between the teachers and the Bell employees and this was certainly conducive to a healthy, non-threatening learning situation."

"The warmth and knowledge of directors/presentors, clear presentation of concepts, receptive environment, and adequate time to understand concepts and develop ideas."

"The small group situation, the openness of the employees and teachers, and not to mention the friendliness of the leaders."

"It gave me a chance to step back and look at the reason for education and how it influences children, the exposure to others and their ideas and a chance to work with non-educators."

Mountain Bell: WHAT FACTOR OR FACTORS CONTRIBUTED MOST TO YOUR FEELING THIS WAY? (Subsequent to item 3)

"I have gotten so much out of the interaction between the employees and teachers--I felt most all were receptive to information, both ways, and that we all have learned quite a bit about how someone performs in another occupation--in my case, teaching and how we can share what we know with one another. Hopefully we will be more open in the future to other possibilities which on the surface seem unlikely, but which may be valuable."

"The workshop didn't really lay out our task. I realize though that this was a pilot project."

"My major dissatisfaction came from the difference in educational philosophy that existed between myself and the teacher with whom I was paired. I would have liked to have had more background as to what the Company hoped to accomplish. Perhaps this could have been through an initial background session."

"The progression of not knowing what was expected to a total finished useful product--and again the interaction, openness of those in charge to the ideas that came up."

"Through all the sessions, I never felt that I knew what our goal was and to what extent we are involved. The sessions for me personally were very beneficial, but what the involvement Company-wise & where do we go from here were unanswered."

Site II - Butte
Item 4

Educators: WHAT FACTOR OR FACTORS CONTRIBUTED MOST TO YOUR FEELING THIS WAY? (subsequent to item 3)

"Possibly the interest shown by the Bell personnel was the most important factor. Again, students responded well to this, perhaps because of the concern for the individual student by this company."

"The people I became associated with were the key to the success of the program. It was very enjoyable, besides being very educational."

"The stimulation that the discussions brought out and how I could apply some ideas in my teaching."

"Increasing and renewing my awareness of the broad concept of education is probably the greatest positive aspect of this program I can pinpoint. That makes the program very satisfying."

Mountain Bell: WHAT FACTOR OR FACTORS CONTRIBUTED MOST TO YOUR FEELING THIS WAY? (subsequent to item 3)

"The cooperation of all involved, and the interest of the students."

"Working with the students was great and I feel it is well worthwhile if we got through to a few of them. It has made me more aware of my own process of learning and how to improve my awareness of learning."

"A good program genuinely interested in the student that stimulates thoughts and ideas from those in various walks of life which can be used effectively to aid students."

"From my standpoint all of this was very interesting and enlightening. I hadn't really considered a number of things brought up. It's amazing how you live in a day to day world and never give a second thought to what you are doing for yourself or others."

Butte Community Person: WHAT FACTOR OR FACTORS CONTRIBUTED MOST TO YOUR FEELING THIS WAY? (Subsequent to item 3)

"I was excited about the general interest everyone felt about the need for better career education, and the non-threatening sharing quality of the groping for some answers. I must admit I'd like some firmer answers, although I know there aren't any easy ones."

Helena - Site III

Item 4

Educators: WHAT FACTOR OR FACTORS CONTRIBUTED MOST TO YOUR FEELING THIS WAY? (Subsequent to item 3)

"-The applicability of the resources provided for the student by Mountain Bell

-The personalities involved.

-The courtesy and sincerity evidenced by Mountain Bell.

-The emphasis, by the instructor, on learning in general and the de-emphasis on Career Education indoctrination."

"When I was asked to take part in the workshop, I felt it would be worthwhile only if I could bring in new information and experience into my classroom. The workshop has accomplished this goal for me and has left me with something I can use and improve upon in the future."

"The interest in these subjects was greatly improved over other years when no outside information or resource people were used."

"1. The willingness of Ma Bell to involve itself in education.
2. The talent, wit, and openness of the Ma Bell employee participants.
3. The free-flowing, relaxed atmosphere of the workshops.
4. The opportunity to extend our school into the community and Helena's major private employer.
5. The forced necessity to develop a different approach to education - using Ma Bell to teach is unusual."

Mountain Bell: WHAT FACTOR OR FACTORS CONTRIBUTED MOST TO YOUR FEELING THIS WAY? (subsequent to Item 3)

"I would have to rate this experience a 6 because it worked a complete change in my attitude. I thought I went in with an open mind but after the first two-day session I was very negative. She (Charlotte) expected me to teach a whole class! She was interested in knowing what my complete lesson plan would be like and wanted to go over it with me! This angered me because I felt I should only have to teach a couple of minutes - talk to the kids off the top of my head about my job at the Company. Well, Charlotte perservered and we made up a complete lesson plan - using what the kids had been working with - percentages. It worked great when I taught the class except for the jitters the first minute or two (our detailed lesson plan pulled me through). The kids learned something and I learned a lot."

"The employee-teacher classroom project had a great deal to do with how I feel about this workshop. It is with this type of concept, that I can relate to my job the best. I also feel that the in-school part of this project is quite short and could be extended to a fuller potential."

"-The response of students to our visits,

-Realization that our unit could be expanded to encompass the entire school year - my realization that my job can be expanded and improved upon by what I absorbed in workshop and classroom experience.

-Our experience was a working model of what was described in the first session i.e. 'what is done in the classroom actually works outside' and at no time did I feel I was solely representing Mountain Bell as a future employer to the students. I was purely a working, talking resource in the classroom."

"The interaction of the group, the innovation and imagination of the instructor and the method of instruction will be and has been very useful to me personally in the development of the supervisors in my office. It would be most helpful for me, as a manager, to have a session on teaching ideas similar to those that I have seen used in this session."

Great Falls - Site IV
Item 4

Educators: WHAT FACTOR OR FACTORS CONTRIBUTED MOST TO YOUR FEELING THIS WAY? (subsequent to Item 3)

"Most of what I learned left me with a generally positive attitude about the project. It should be easier for me to contact outside people in the future to supplement my classroom activities."

"The spirit of cooperation and enthusiasm generated by those taking part in this project."

"The student's response to our Mountain Bell resource person. (Students became very interested in all phases of Mountain Bell's jobs and services.)"

"This wasn't a class full of 'bull' where the students had to conform to the thoughts and ideals of the instructor, but where each could contribute to help build the class. Also, there was a definite goal for the class and we all worked together toward this goal. I wish I knew more about making out the unit outline."

"Seeing education from a different side is often over helpful to the teacher. Sharing of ideas was a highlight of the program. Infusion of Career Education into different subject areas was interesting."

"Meeting people in other fields besides education and discovering their concerns and problems was a factor that contributed to my feelings."

Mountain Bell: WHAT FACTOR OR FACTORS CONTRIBUTED TO YOUR FEELING THIS WAY? (subsequent to Item 3)

"The teacher, the resources (information, films, worksheets) that were made available to me by Mountain Bell, and other sources, and the overall attitude of the students I came in contact with."

"The education I received in regards to how to possibly be able to help someone or others."

"The workshop, in general, was most satisfying. However, there seemed to be a considerable amount of unproductive time spent while we were meeting as a group."

"The actual classroom visit, talking to the class and answering direct questions from the 8th grade students about career education."

COMMENTS

In addition to the verbal responses called for in Items 1, 2, and 4, participants were asked to offer any other comments they deemed to be appropriate. These additional comments are broken down into the catagories of:

I. Personal Benefit
II. General Comments
III. Frustrations
IV. Suggestions for Improvement
V. Concerns for the Future
VI. Summary and Conclusions

I. Personal Benefit

"This experience has gotten my interests up in Math - by far my worst subject in school - and I'm taking a Company Correspondence course in it."

"Teaching the class has also made me realize I must keep the people in the office more informed."

"Beyond the education, I felt this was valuable opportunity to get to know others in the company, in positions I otherwise would have no contact with. I learned quite a bit about the other departments, and their interaction with mine. I had felt very isolated from the rest of the company as an operator and had little knowledge of their operations. This will help me on my job when informing customers who to call for problems and information."

"I found that I like my job. Even though the Mountain Bell operation was interesting I couldn't imagine working there in most of the positions."

"I think this was a great experience, and I know that I feel a lot better about teachers. I used to be very nervous about talking to people, but now I feel a little easier about it."

II. General Comments

"Physics, the course I teach, is pure science and sometimes lacks in intrahuman communication. The workshop as I see it has been an experience in communication which seems to be needed in the field I teach in. If students are to be encouraged to follow careers in physics-related fields they must meet and have opportunities to communicate with people satisfied and enthusiastic about their job."

"1. Really liked time, within the sessions, to work on final product

2. Field-trip - excellent, warm reception to class, thorough

presentation of important concepts, organization of tour and excellent timing/pacing of tour."

"1. It's important for employees to be on time.

2. Feel a part of presentation.

3. Bringing in materials that students can experiment with or see are especially valuable.

Example: Phones - old and new, climbing gear"

"Knowing information about a major company helps the student in the guidance role."

"After the first visitation I relaxed with both the teacher and students. I found that what they wanted and/or needed to know was something that I had learned through my job and previous schooling."

"Students would rather see and touch material instead of hearing about them."

III. Frustrations

"One drawback to the class at the beginning was the difference in terminology - left me with a feeling of wandering out in left-field so I'm sure I missed out on a few pertinent facts."

"I felt that at first the purpose of the workshop was rather vague and I felt for some time that I was kind of lost as to what I should be doing or what was going to be expected of me."

IV. Suggestions for Improvement

"I do feel more effort should be made to explain how a private enterprise representative will or can be used as a resource - felt my role was very vague until first time in classroom. From then on everything jelled. Perhaps a preliminary workshop for teachers would be useful to help them (or show them how to) draw from the resource person those specific objectives they hope to put across in their unit."

"1. Schedule the five day workshop into three. I think that the program could be compacted with the same results into shorter time frame.

2. Schedule future activities and training sessions at the beginning of the year to allow for expansion and follow up.

3. Include lay persons as part of the process.

4. Keep the Clapsaddle approach to instruction. He did much to remove the cookbook process of learning theory, did not perform as the star of the show and evidenced that he knows what it is like to teach and, most importantly, sit in the student's seat."

"I definitely think there should be time to have "gab sessions" with both teachers and resource people present. Social studies can give ideas to math people just to discover spin-off benefits."

"The workshops were probably 2 days too long. Three day workshops would have been sufficient, I think. I am reluctant to miss such a large block of teaching time. This is my only complaint!"

"I think we all could have done with a little more exposure to the job situation of the person we were working with. I feel it would have helped me quite a bit on my first visit to the classroom if I had had some previous experience with the children, or at least had a better idea of what went on in the classroom, and the actual teaching process. After the first visit I had a much better idea of what I would be able to do and how I could tie concepts from my job in with the classroom experiences."

"Time seems to be a big factor in getting the approach of career education into the classroom. I almost think that a good program needs to be planned in the summer and ready to be put into the program in the fall and then continued to be interwoven in the curriculum throughout the school year."

"Since I am in math, it would have been beneficial to me if Mountain Bell had a list of jobs that require math and the type of math needed (such as percent, decimals, probability, etc.)."

V. Concerns For the Future

"I would like to try networks and computer programming with a resource person next year."

"Follow up is absolutely nesessary. I am looking forward to trying out the evaluation unit we prepared next year, especially at those school year times when the unit would be most relevant."

"More workshops should be developed throughout the state. This pilot project is an excellent beginning, but it is only a beginning."

"Clapsaddle did an excellent job moving the workshops along. Such a facilitator seems to me necessary for the extension of this Ma Bell project."

"As an experience for myself I really enjoyed it and would like to be involved with finishing the project. I feel we are kind of left hanging not knowing where the project is headed. I would like to see the employees involved be able to get together with Diane to write up and get involved in the finished product. As it is now we don't know if it is a success or failure and feel we probably won't know."

"I would appreciate the opportunity to see and hear some of or all the outcomes of the workshop."

"Sharing of different things that happened in the other sites would be interesting. (Butte, Helena, etc)"

VI. SUMMARY AND CONCLUSIONS

There was no appreciable difference among the responses of the participants to item 3, either between Bell employees and educators or among the four sites. The range for responses was 4.50 to 5.75 with a mean of 5.22 on a six point scale. Therefore, it was concluded that the participants rated the overall workshops very highly.

The verbal responses to items 1, 2, and 4 are generally quite positive. A consistent response was made to the interaction among participants which was felt to enhance communication and learning.

Overall, the workshops were received well and the participants felt they benefited from their involvement.

The additional comments were quite positive in nature, and also provide some considerations for future expansion of the project.

PARTICIPANT TRAINING SUMMARY

COMMENDATIONS

The following commendations are made in light of the data obtained from the evaluations of the Cooperative Design for Career Education workshops and presentations:

1) One may gather from the evaluation data that the specific objectives for the project were met. These objectives were to:
    A. Provide training for Mountain Bell and School District personnel in developing career education instructional units to be used in classrooms with students.
    B. Impart an understanding of career education to School District and Mountain Bell personnel.
    C. Help Mountain Bell and School District personnel understand how Mountain Bell employees can become classroom resources.
    D. Assist training participants in the development of a career education instructional unit which incorporates the use of a Mountain Bell employee as a classroom resource.
2) The workshops were personally very satisfying for educators and Mountain Bell personnel.
3) The workshops served as a place where a better understanding of the educational process was gained by the resource personnel, and where educators became more aware of the various opportunities available to increase student involvement in career education.

4) The trainer for the four site workshops may be commended for his motivation, innovations, and skill in presenting the information to be assimilated by the participants.

5) The class presentations were well received by the students. The students thought the materials used were interesting and relevant. They regarded the resource persons' participation highly. And, the units helped the students better understand the concept of career education.

RECOMMENDATIONS

In terms of the objectives established for the Cooperative Design for Career Education, and considering the data obtained, the following recommendations appear to be in order:

1) The data contained in this report strongly suggest, and the evaluator recommends, that this program be continued and expanded. There is little doubt that the program objectives were met and that participants (teachers, resource persons, and students) were personally satisfied.

2) It was the opinion of several of the Mountain Bell and school personnel that the workshop objectives be better clarified. In particular, the evaluator suggests that participants could better understand the total scope of student needs.

3) Running commentaries on the progress and particular problems of each workshop might be kept by the trainer, or an observer, so that the differences in the site evaluations may be clarified. (For example, what accounted for the poor to fair teacher ratings of the equipment and tools used in Great Falls, and the good to excellent ratings of the Missoula teachers for the equipment and tools used.)

4) The evaluator suggests that the evaluation instruments used be made more specific to better identify the unique characteristics of the program.

5) It is proposed that a follow-up evaluation be made in order to determine if the participants in the program continue to use the concepts and knowledge gained during the program.

EVALUATION OF THE
INSTRUCTIONAL UNIT PRESENTATIONS

EVALUATION OF THE INSTRUCTIONAL UNIT PRESENTATIONS

The evaluations of the Cooperative Design for Career Education Project were not limited to those of the workshop program. The classroom presentations conducted by the Mountain Bell employees, in cooperation with the teachers, were evaluated by:

1) an assessment of the resource person by the teacher
2) an assessment by the Mountain Bell employee of the presentation and the teacher
3) an assessment of the presentation by participating students.

Four different in-class presentations by Mountain Bell employees were delivered at each of the four sites, making a total of sixteen different instructional units. The evaluations from each presentation at the four sites have been combined so that the four sites' evaluations may be compared. It should be noted that the items scored N/A were not figured into the means.

CLASS PRESENTATIONS

The following data was not included as it was not received: (1) presentation 2 data from Team 4, Site I (Helena); (2) presentation 2 data from Team 5, Site IV (Missoula). The number of respondants for each item is noted by that item.

UNIT EVALUATIONS

The results from the teacher evaluations of the resource persons, in Missoula (Table XVI), are very favorable. The lowest overall rating (3.71) was for the presentors' utilization of the inquiry process. The highest was for the equipment and tools used (4.83).

The resource persons' evaluations of the visitations for Missoula (Table XVII) are all good to excellent. Apparently they felt the teachers and the students satisfied the evaluation criteria.

The students of Missoula (Table XVIII) rated the presentation, resource person, and materials highly. The lowest mean was 3.51 for characteristics of the materials in relation to the presentation.

Butte evaluations are presented in Tables XIX through XXI. The teachers (Table XIX) rated the resource persons' presentations and characteristics of the presentors good to excellent. The lowest mean was 3.50 for equipment and tools used. The resource persons' evaluations of the teachers were good to excellent (Table XX). The students were given positive ratings also. The lowest mean of 3.13 (Fair) was for the students' willingness to participate in "hands on" activities.

The range of the means for the Butte students' evaluations of the presentations, resource persons, and materials (Table XXI) was 3.66 to 4.16. The mean of 3.66 was for how the presentation helped them to see how school work relates to the real world.

The students thought the materials related well to the presentation (4.16). One may note that the teachers' evaluation of the equipment and tools used (3.50) was their lowest rating.

The Helena teachers (Table XXII) rated the presentation, resource people, and materials very highly. No mean fell below 4.17 (utilizing the inquiry process). The Helena resource people rated the teachers and students very highly also (Table XXIII).

From Table XXIV, it appears that the Helena students were very satisfied with all aspects of the unit presentations. No mean was lower then 4.29 (presentation helped me to understand the subject).

The evaluations of the resource people by the Great Falls teachers (Table XXV), show that the teachers thought the presentations were good to excellent. All evaluations of the characteristics of the presentors were good to excellent except for a mean of 3.00 (fair) for involving the students in a "hands on" manner. The teachers thought the materials were fair to good with a low mean of 2.67 for the equipment and tools.

The resource people in the Great Falls presentations (Table XXVI) evaluated the teachers good to excellent. The lowest mean for the students was 3.0 (fair) for the students' willingness to participate in "hands on" activities.

The Great Falls students (Table XXVII) rated the presentation as good on a poor to excellent scale. They also evaluated the resource people and the characteristics of the materials as good.

The results of the evaluations from the teachers, resource people and students in the four sites (a total of sixteen instructional units) are combined in Tables XXVIII through XXX.

Table XXVIII shows the combined results of the teachers' evaluation of the presentations, presentors, and materials. The presentations were rated as good to excellent. The characteristics of the presentors also received good to excellent evaluations. The lowest evaluation (3.76) was for the equipment and tools used. This is not in itself a low rating, but is comparitively low to other means.

The evaluations of the resource people are presented on Table XXIX. Teacher characteristics were rated as good to excellent. Characteristics of the students were evaluated as good with the lowest mean of 3.83 for "asked relevant questions".

The students' combined evaluations of the presentations, resource people, and materials may be seen on Table XXX. The means ranged from 3.93 (Helped me to see how school work relates to the real world) to 4.30 (Characteristics of the materials - interesting). The evaluations were good to excellent on all criteria.

The data suggests that all three populations (teachers, resource persons, and students) felt that the presentations were helpful and worthwhile.

TABLE XVI

Missoula

Teacher Evaluation of Resource Person

Statement	N	Rating Scale	Mean
I. Characteristics of Presentation:		N/A Poor Fair Good Excellent	
A. Emphasis appropriate to request	7	x 1''''2''''3''''4''''5	4.57
B. Length of presentation appropriate	6	x 1''''2''''3''''4''''5	4.50
C. Depth of presentation appropriate	6	x 1''''2''''3''''4''''5	4.67
II. Characteristics of Presentor:			
A. Involved students orally	7	x 1''''2''''3''''4''''5	4.29
B. Involved students in a "hands on" manner	7	x 1''''2''''3''''4''''5	4.43
C. Utilized inquiry process	7	x 1''''2''''3''''4''''5	3.71
D. Involved teachers appropriately	7	x 1''''2''''3''''4''''5	4.43
III. Characteristics of Materials:			
A. Printed	6	x 1''''2''''3''''4''''5	4.00
B. Audio Visuals	5	x 1''''2''''3''''4''''5	4.80
C. Equipment and Tools	6	x 1''''2''''3''''4''''5	4.83

TABLE XVII
Missoula

Resource Person Evaluation of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of Teacher		N/A Poor Fair Good Excellent	
A. Clearly defined assignment	7	x 1''''2''''3''''4''''5	4.14
B. Prepared students for visit	7	x 1''''2''''3''''4''''5	4.71
C. Exhibited emotional support during presentation	7	x 1''''2''''3''''4''''5	4.43
II. Characteristics of Students			
A. Asked relevant questions	7	x 1''''2''''3''''4''''5	4.14
B. Exhibited other signs of interest	7	x 1''''2''''3''''4''''5	4.43
C. Were willing to participate in "hands on" activities	7	x 1''''2''''3''''4''''5	5.00

TABLE XVIII
Missoula

Student Evaluation of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of the Presentation:		N/A Poor Fair Good Excellent	
A. Helped me to understand the subject	158	x 1''''2''''3''''4''''5	4.62
B. Helped me to see how school work relates to the real world	158	x 1''''2''''3''''4''''5	4.01
C. As students we got to participate in the activity	124	x 1''''2''''3''''4''''5	4.59
II. Characteristics of the resource person:			
A. Encouraged questions from us	158	x 1''''2''''3''''4''''5	4.33
B. Helped us find the answers to our questions	158	x 1''''2''''3''''4''''5	4.51
C. Was interested in us as persons	158	x 1''''2''''3''''4''''5	4.34
III. Characteristics of Materials (if we received any)			
A. Interesting	137	x 1''''2''''3''''4''''5	4.62
B. Related to the presentation	137	x 1''''2''''3''''4''''5	3.51

TABLE XIX

Butte

Teacher Evaluation of Resource Person

Statement	N	Rating Scale	Mean
I. Characteristics of Presentation:		N/A Poor Fair Good Excellent	
A. Emphasis appropriate to request	8	1''''2''''3''''4''''5	5.00
B. Length of presentation appropriate	8	1''''2''''3''''4''''5	4.63
C. Depth of presentation appropriate	8	1''''2''''3''''4''''5	4.50
II. Characteristics of Presentor:			
A. Involved students orally	8	1''''2''''3''''4''''5	4.00
B. Involved students in a "hands on" manner	7	1''''2''''3''''4''''5	4.43
C. Utilized inquiry process	8	1''''2''''3''''4''''5	4.00
D. Involved teachers appropriately	8	1''''2''''3''''4''''5	4.75
III. Characteristics of Materials:			
A. Printed	6	1''''2''''3''''4''''5	3.67
B. Audio Visuals	7	1''''2''''3''''4''''5	4.86
C. Equipment and Tools	6	1''''2''''3''''4''''5	3.50

TABLE XX

Butte

Resource Person Evaluation of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of Teacher		N/A Poor Fair Good Excellent	
A. Clearly defined assignment	8	x 1''''2''''3''''4''''5	4.13
B. Prepared students for visit	8	x 1''''2''''3''''4''''5	4.38
C. Exhibited emotional support during presentation	8	x 1''''2''''3''''4''''5	4.75
II. Characteristics of Students			
A. Asked relevant questions	8	x 1''''2''''3''''4''''5	3.63
B. Exhibited other signs of interest	8	x 1''''2''''3''''4''''5	4.13
C. Were willing to participate in "hands on" activities	8	x 1''''2''''3''''4''''5	3.13

TABLE XXI
Butte

Student Evaluation of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of the Presentation:		N/A Poor Fair Good Excellent	
A. Helped me to understand the subject	158	x 1''''2''''3''''4''''5	3.79
B. Helped me to see how school work relates to the real world	158	x 1''''2''''3''''4''''5	3.66
C. As students we got to participate in the activity	158	x 1''''2''''3''''4''''5	3.84
II. Characteristics of the resource person:			
A. Encouraged questions from us	158	x 1''''2''''3''''4''''5	3.85
B. Helped us find the answers to our questions	158	x 1''''2''''3''''4''''5	3.98
C. Was interested in us as persons	158	x 1''''2''''3''''4''''5	3.79
III. Characteristics of Materials (if we received any)			
A. Interesting	158	x 1''''2''''3''''4''''5	4.05
B. Related to the presentation	158	x 1''''2''''3''''4''''5	4.16

TABLE XXII
Helena

Teacher Evaluation of Resource Person

Statement	N	Rating Scale	Mean
I. Characteristics of Presentation:		N/A Poor Fair Good Excellent	
A. Emphasis appropriate to request	6	x 1''''2''''3''''4''''5	5.00
B. Length of presentation appropriate	6	x 1''''2''''3''''4''''5	4.67
C. Depth of presentation appropriate	6	x 1''''2''''3''''4''''5	4.83
II. Characteristics of Presentor:			
A. Involved students orally	6	x 1''''2''''3''''4''''5	4.67
B. Involved students in a "hands on" manner	6	1''''2''''3''''4'''x5	4.83
C. Utilized inquiry process	6	x 1''''2''''3''''4''''5	4.17
D. Involved teachers appropriately	6	x 1''''2''''3''''4''''5	4.67
III. Characteristics of Materials:			
A. Printed	6	x 1''''2''''3''''4''''5	4.33
B. Audio Visuals	4	x 1''''2''''3''''4''''5	5.00
C. Equipment and Tools	4	x 1''''2''''3''''4''''5	5.00

TABLE XXIII
Helena

Resource Person Evaluation of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of Teacher		N/A Poor Fair Good Excellent	
A. Clearly defined assignment	7	x 1''''2''''3''''4''''5	4.86
B. Prepared students for visit	7	x 1''''2''''3''''4''''5	4.86
C. Exhibited emotional support during presentation	7	x 1''''2''''3''''4''''5	5.00
II. Characteristics of Students			
A. Asked relevant questions	7	x 1''''2''''3''''4''''5	4.29
B. Exhibited other signs of interest	7	x 1''''2''''3''''4''''5	4.43
C. Were willing to participate in "hands on" activities	7	x 1''''2''''3''''4''''5	5.00

TABLE XXIV
Helena
Student Evaluation
of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of the Presentation:		N/A Poor Fair Good Excellent	
A. Helped me to understand the subject	91	x 1''''2''''3''''4''''5	4.29
B. Helped me to see how school work relates to the real world	91	x 1''''2''''3''''4''''5	4.33
C. As students we got to participate in the activity	91	x 1''''2''''3''''4''''5	4.39
II. Characteristics of the resource person:			
A. Encouraged questions from us	91	x 1''''2''''3''''4''''5	4.45
B. Helped us find the answers to our questions	91	x 1''''2''''3''''4''''5	4.34
C. Was interested in us as persons	91	x 1''''2''''3''''4''''5	4.61
III. Characteristics of Materials (if we received any)			
A. Interesting	91	x 1''''2''''3''''4''''5	4.61
B. Related to the presentation	91	x 1''''2''''3''''4''''5	4.50

TABLE XXV
Great Falls
Teacher Evaluation of
Resource Person

Statement	N	Rating Scale	Mean
I. Characteristics of Presentation:		N/A Poor Fair Good Excellent	
A. Emphasis appropriate to request	9	1''''2''''3''''4''x'5	4.67
B. Length of presentation appropriate	9	1''''2''''3''''4'x''5	4.44
C. Depth of presentation appropriate	9	1''''2''''3''''4''x'5	4.67
II. Characteristics of Presentor:			
A. Involved students orally	9	1''''2''''3''''4x''''5	4.11
B. Involved students in a "hands on" manner	9	1''''2''''3x''''4''''5	3.00
C. Utilized inquiry process	9	1''''2''''3''''4x''''5	4.11
D. Involved teachers appropriately	9	1''''2''''3''''4'x''5	4.44
III. Characteristics of Materials:			
A. Printed	9	1''''2''''3'''x4''''5	3.78
B. Audio Visuals	9	1''''2''''3'x''4''''5	3.44
C. Equipment and Tools	9	1''''2''x'3''''4''''5	2.67

TABLE XXVI
Great Falls
Resource Person Evaluation of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of Teacher		N/A Poor Fair Good Excellent	
A. Clearly defined assignment	7	x 1''''2''''3''''4''''5	4.00
B. Prepared students for visit	7	x 1''''2''''3''''4''''5	4.57
C. Exhibited emotional support during presentation	7	x 1''''2''''3''''4''''5	4.86
II. Characteristics of Students			
A. Asked relevant questions	7	x 1''''2''''3''''4''''5	3.29
B. Exhibited other signs of interest	7	x 1''''2''''3''''4''''5	3.43
C. Were willing to participate in "hands on" activities	6	x 1''''2''''3''''4''''5	3.00

TABLE XXVII

Great Falls

Student Evaluation
of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of the Presentation:		N/A Poor Fair Good Excellent	
A. Helped me to understand the subject	177	x 1''''2''''3''''4''''5	4.05
B. Helped me to see how school work relates to the real world	177	x 1''''2''''3''''4''''5	3.90
C. As students we got to participate in the activity	177	x 1''''2''''3''''4''''5	4.03
II. Characteristics of the resource person:			
A. Encouraged questions from us	177	x 1''''2''''3''''4''''5	4.01
B. Helped us find the answers to our questions	177	x 1''''2''''3''''4''''5	3.95
C. Was interested in us as persons	177	x 1''''2''''3''''4''''5	4.04
III. Characteristics of Materials (if we received any)			
A. Interesting	177	x 1''''2''''3''''4''''5	4.12
B. Related to the presentation	177	x 1''''2''''3''''4''''5	4.11

TABLE XXVIII

Combined

Teacher Evaluation of
Resource Person

Statement	N	Rating Scale	Mean
I. Characteristics of Presentation:		N/A Poor Fair Good Excellent	
A. Emphasis appropriate to request	30	x 1''''2''''3''''4''''5	4.80
B. Length of presentation appropriate	29	x 1''''2''''3''''4''''5	4.55
C. Depth of presentation appropriate	29	x 1''''2''''3''''4''''5	4.66
II. Characteristics of Presentor:			
A. Involved students orally	30	x 1''''2''''3''''4''''5	4.23
B. Involved students in a "hands on" manner	29	x 1''''2''''3''''4''''5	4.07
C. Utilized inquiry process	30	x 1''''2''''3''''4''''5	4.13
D. Involved teachers appropriately	30	x 1''''2''''3''''4''''5	4.57
III. Characteristics of Materials:			
A. Printed	27	x 1''''2''''3''''4''''5	3.93
B. Audio Visuals	25	x 1''''2''''3''''4''''5	4.36
C. Equipment and Tools	25	x 1''''2''''3''''4''''5	3.76

TABLE XXIX

Combined

Resource Person Evaluation of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of Teacher		N/A Poor Fair Good Excellent	
A. Clearly defined assignment	29	x 1''''2''''3''''4''''5	4.28
B. Prepared students for visit	29	x 1''''2''''3''''4''''5	4.62
C. Exhibited emotional support during presentation	29	x 1''''2''''3''''4''''5	4.76
II. Characteristics of Students			
A. Asked relevant questions	29	x 1''''2''''3''''4''''5	3.83
B. Exhibited other signs of interest	29	x 1''''2''''3''''4''''5	4.11
C. Were willing to participate in "hands on" activities	28	x 1''''2''''3''''4''''5	4.04

TABLE XXX

Combined

Student Evaluation of Visitation

Statement	N	Rating Scale	Mean
I. Characteristics of the Presentation:		N/A Poor Fair Good Excellent	
A. Helped me to understand the subject	584	x 1''''2''''3''''4''''5	4.17
B. Helped me to see how school work relates to the real world	584	x 1''''2''''3''''4''''5	3.93
C. As students we got to participate in the activity	550	x 1''''2''''3''''4''''5	4.16
II. Characteristics of the resource person:			
A. Encouraged questions from us	584	x 1''''2''''3''''4''''5	4.12
B. Helped us find the answers to our questions	584	x 1''''2''''3''''4''''5	4.17
C. Was interested in us as persons	584	x 1''''2''''3''''4''''5	4.14
III. Characteristics of Materials (if we received any)			
A. Interesting	563	x 1''''2''''3''''4''''5	4.30
B. Related to the presentation	563	x 1''''2''''3''''4''''5	4.04

ATTACHMENT A

DATE ____________________

SITE ____________________

MT. BELL EMPLOYEE _______

EDUCATOR ________________

Session I
Montana Mountain Bell/School
District Career Education Workshop

Please respond to each statement by circling a number on the continuum, 1-4.

...One is low - of little or no value.

...Four is high - of great value, very helpful.

	Low			High
1. I better understand the meaning of career education as a result of this in-service session.	1	2	3	4
2. I have a better conception of the possible implications for career education as it relates to an overall educational approach.	1	2	3	4
3. I now better understand the total scope of student needs.	1	2	3	4
4. I now better understand how Mountain Bell personnel as resources can enrich classroom instruction.	1	2	3	4

Comments:

ATTACHMENT B

DATE ______________

SITE ______________

MT. BELL EMPLOYEE ______________

EDUCATOR ______________

Session II
Montana Mountain Bell/School District Career Education Workshop

Please respond to each statement by circling a number on the continuum, 1-4.

. . . One is low - of little or no value.

. . . Four is high - of great value, very helpful.

		Low			High
1.	The opportunity to work with my partner in the revision of the presentation helped me to gain a better understanding of how the presentation could be improved.	1	2	3	4
2.	I now have a better idea of the unit design.	1	2	3	4
3.	Participation in the Mountain Bell work site visit provided an opportunity for me to better prepare for the next school visitation.	1	2	3	4
4.	I feel more comfortable with the upcoming Mountain Bell school visitation than I did before the first visitation.	1	2	3	4

Comments:

ATTACHMENT C.

DATE ____________________

SITE ____________________

MT. BELL EMPLOYEE ________

EDUCATOR ________________

Session III
Montana Mountain Bell/School District Career Education Workshop

Please respond to each statement briefly.

1. How have these workshops affected your thinking about education?

2. What activities, resources, or experiences in these workshops were particularly good or helpful?

3. How satisfied were you personally with the workshops?

Very Dissatisfied	1	2	3	4	5	6	Very Satisfied

4. What factor or factors contributed most to your feeling this way?